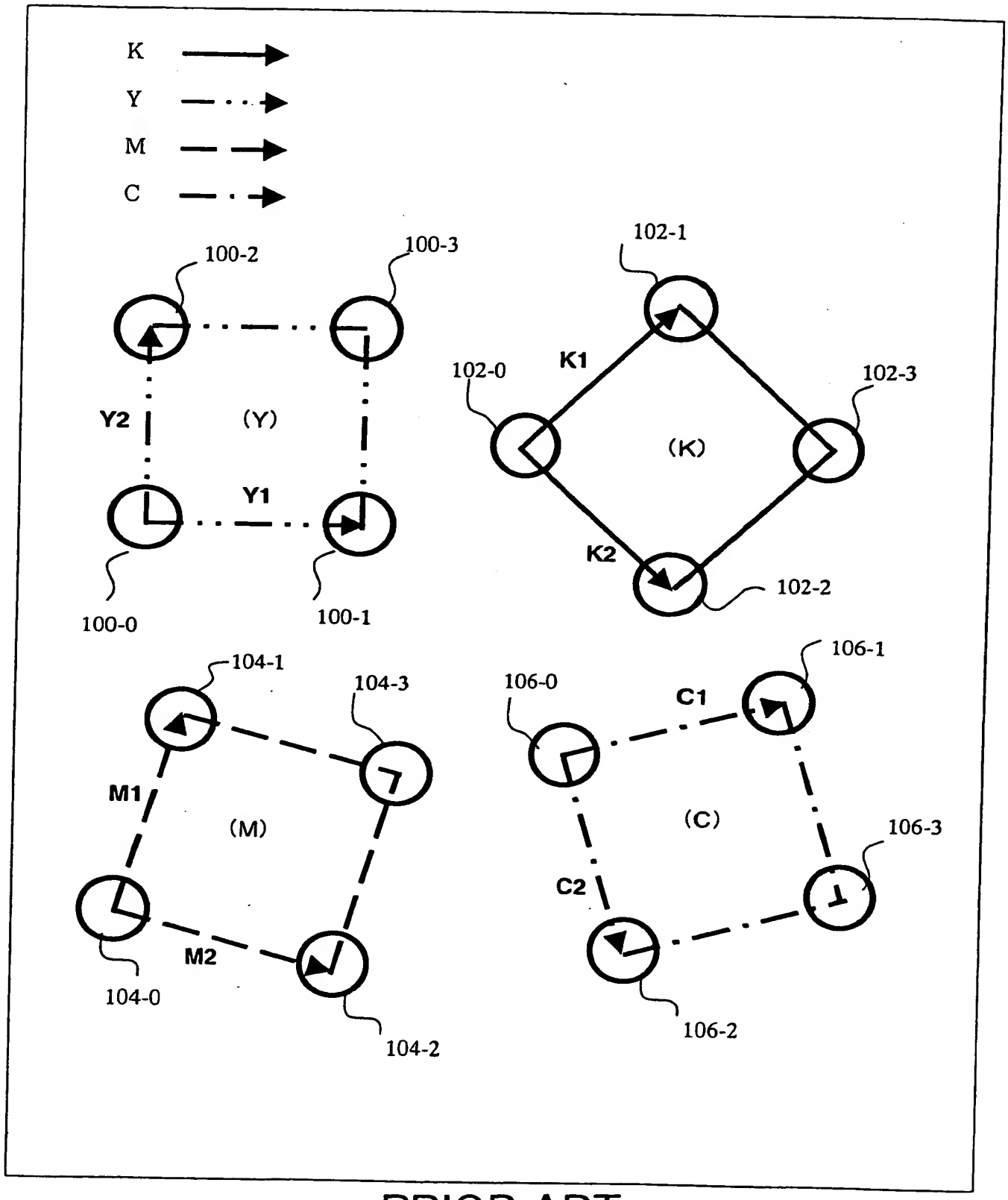
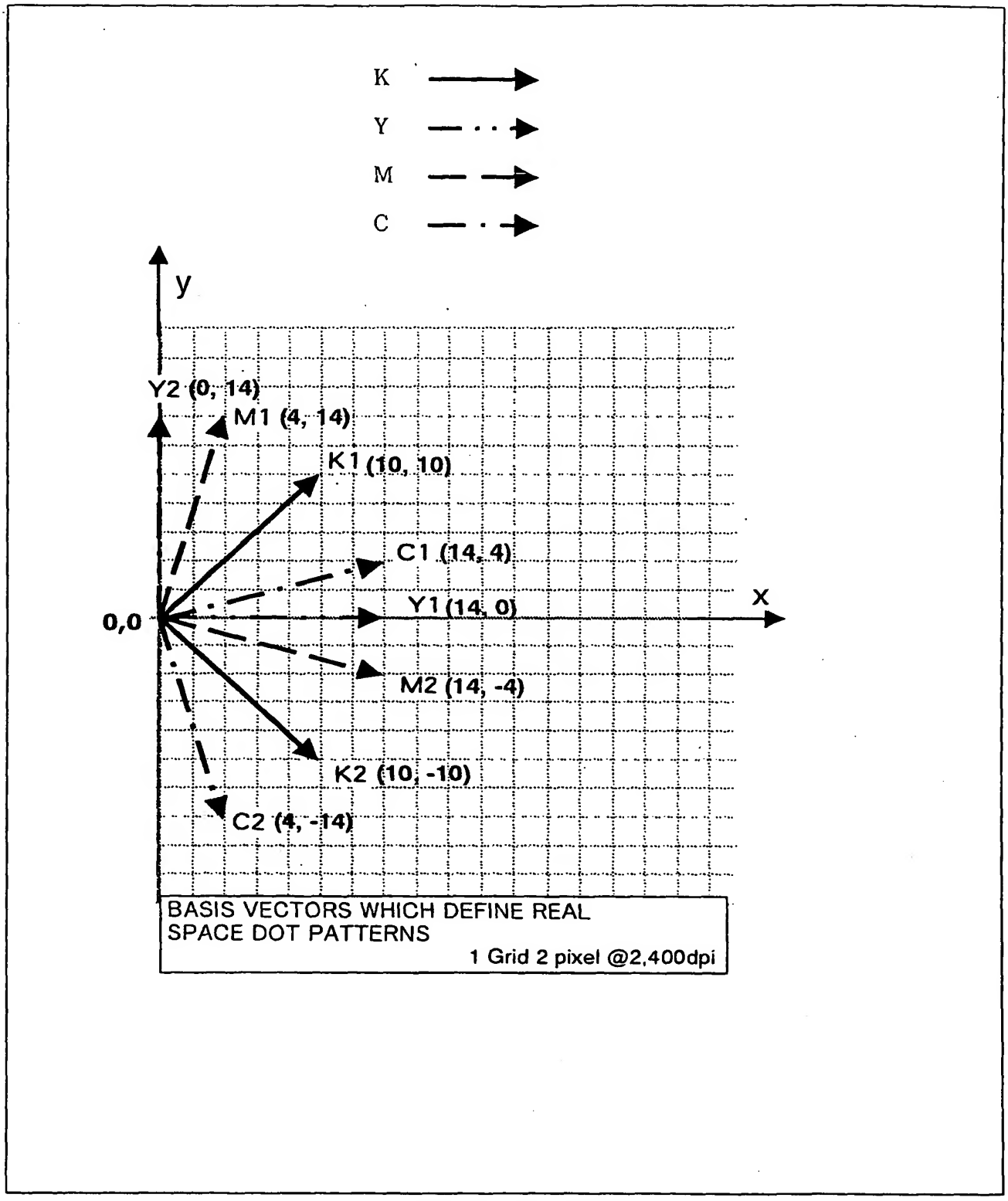
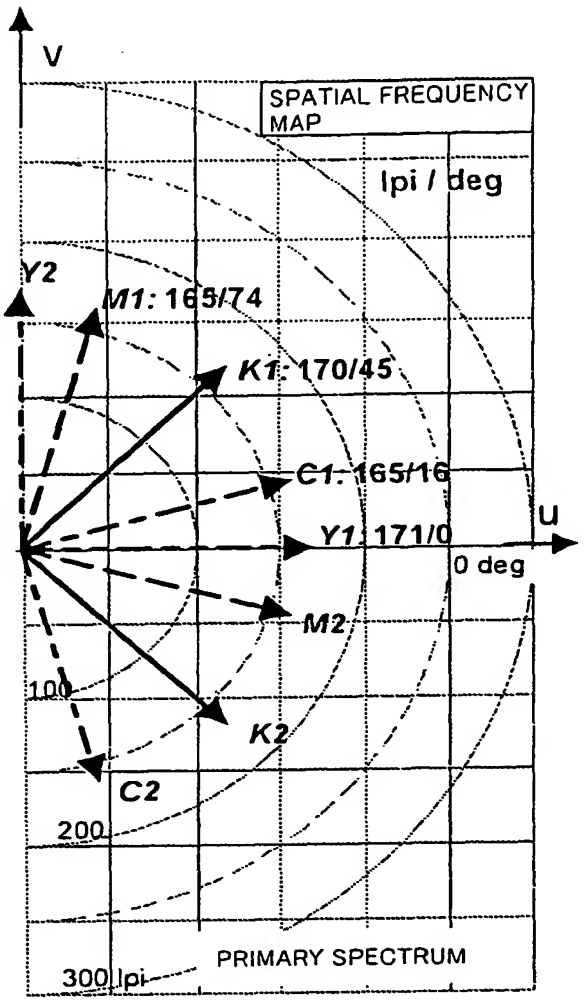
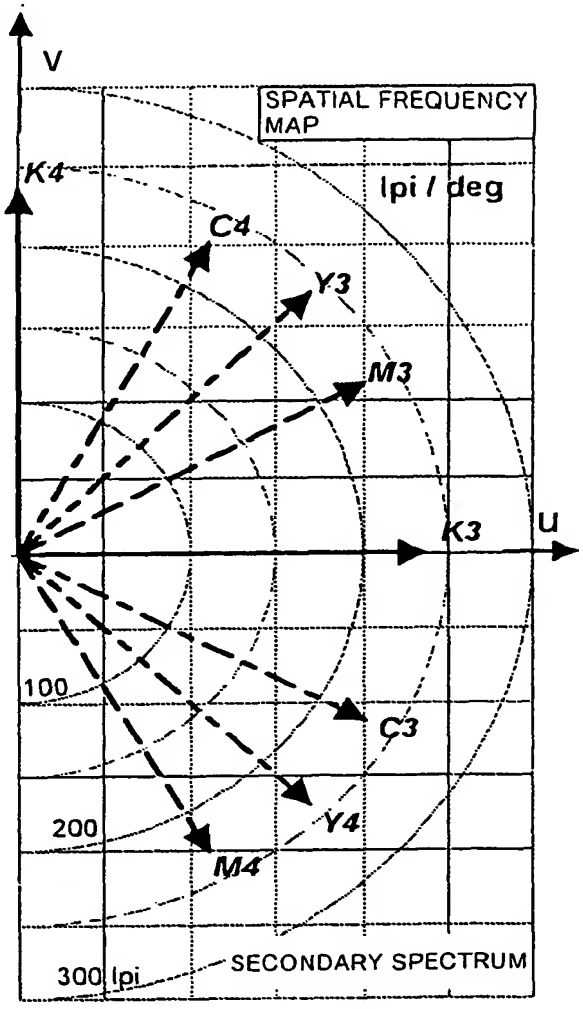


PRIOR ART
FIG. 1



PRIOR ART
FIG. 2





TYPICAL FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

Y1 - C1, Y1 - M2 47 lpi

M1 - K1, C1 - K1 84 lpi

Y1 - K3 69 lpi

$K3 = K1 + K2,\ K4 = K1 - K2$

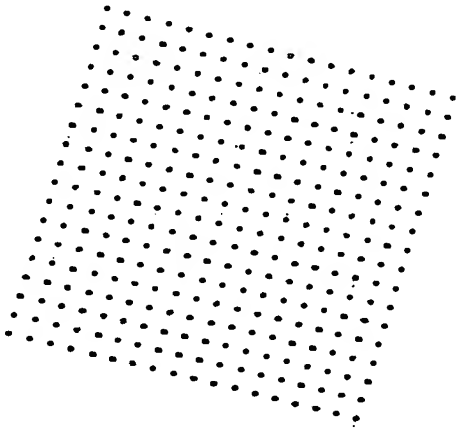
$Y3 = Y1 + Y2,\ Y4 = Y1 - Y2$

$M3 = M1 + M2,\ M4 = -M1 + M2$

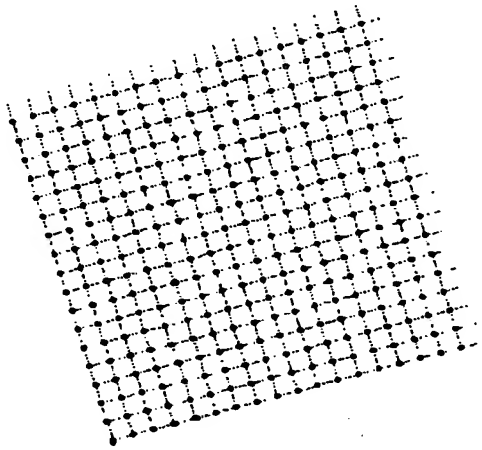
$C3 = C1 + C2,\ C4 = C1 - C2$

PRIOR ART

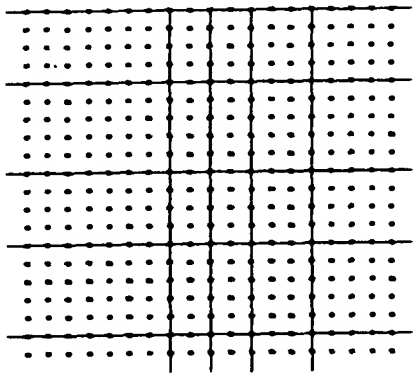
FIG. 3



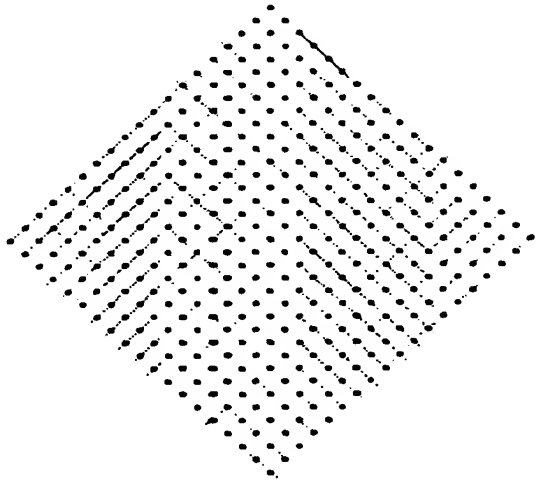
(1) M: Magenta



(2) C: Cyan

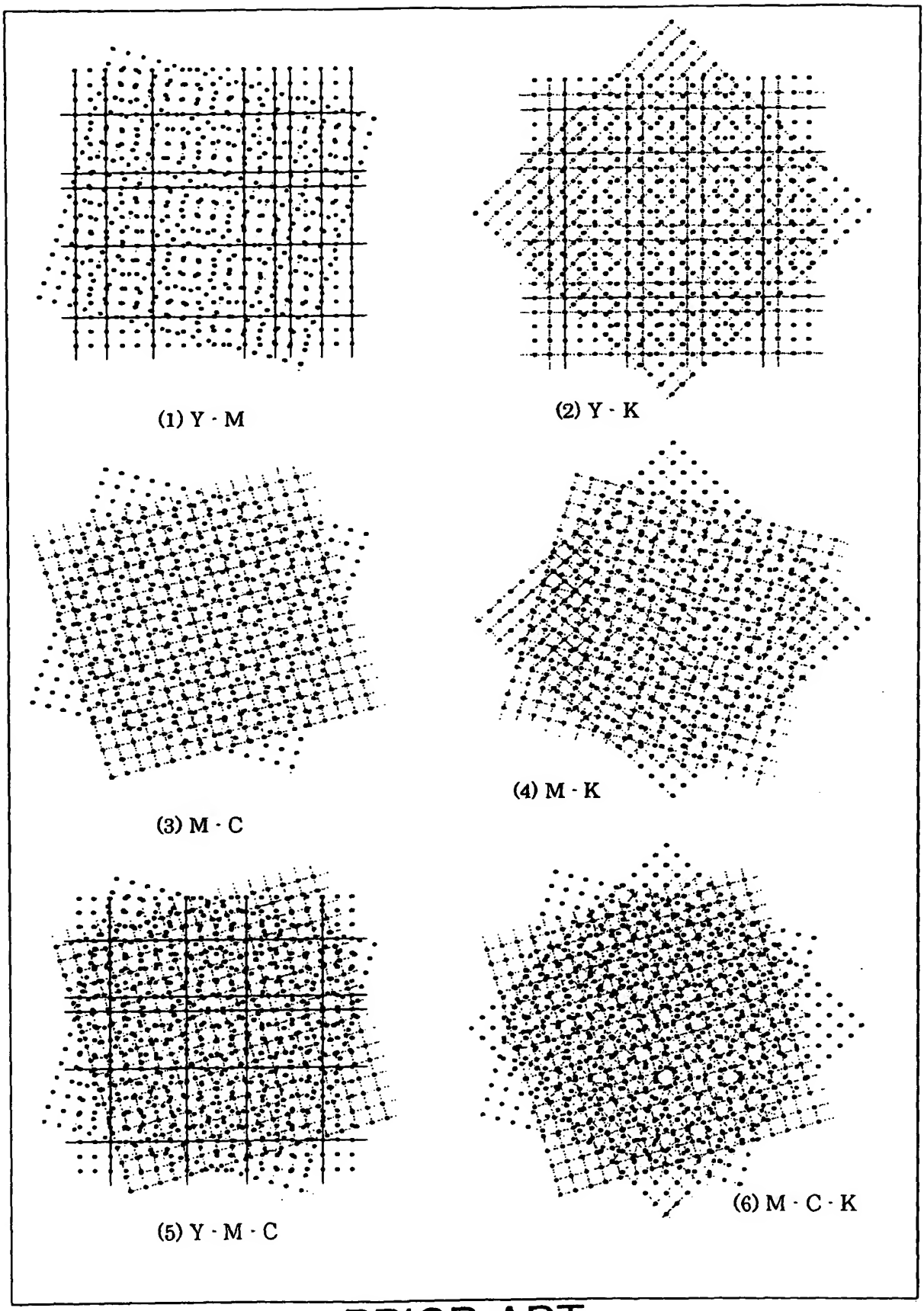


(3) Y: Yellow

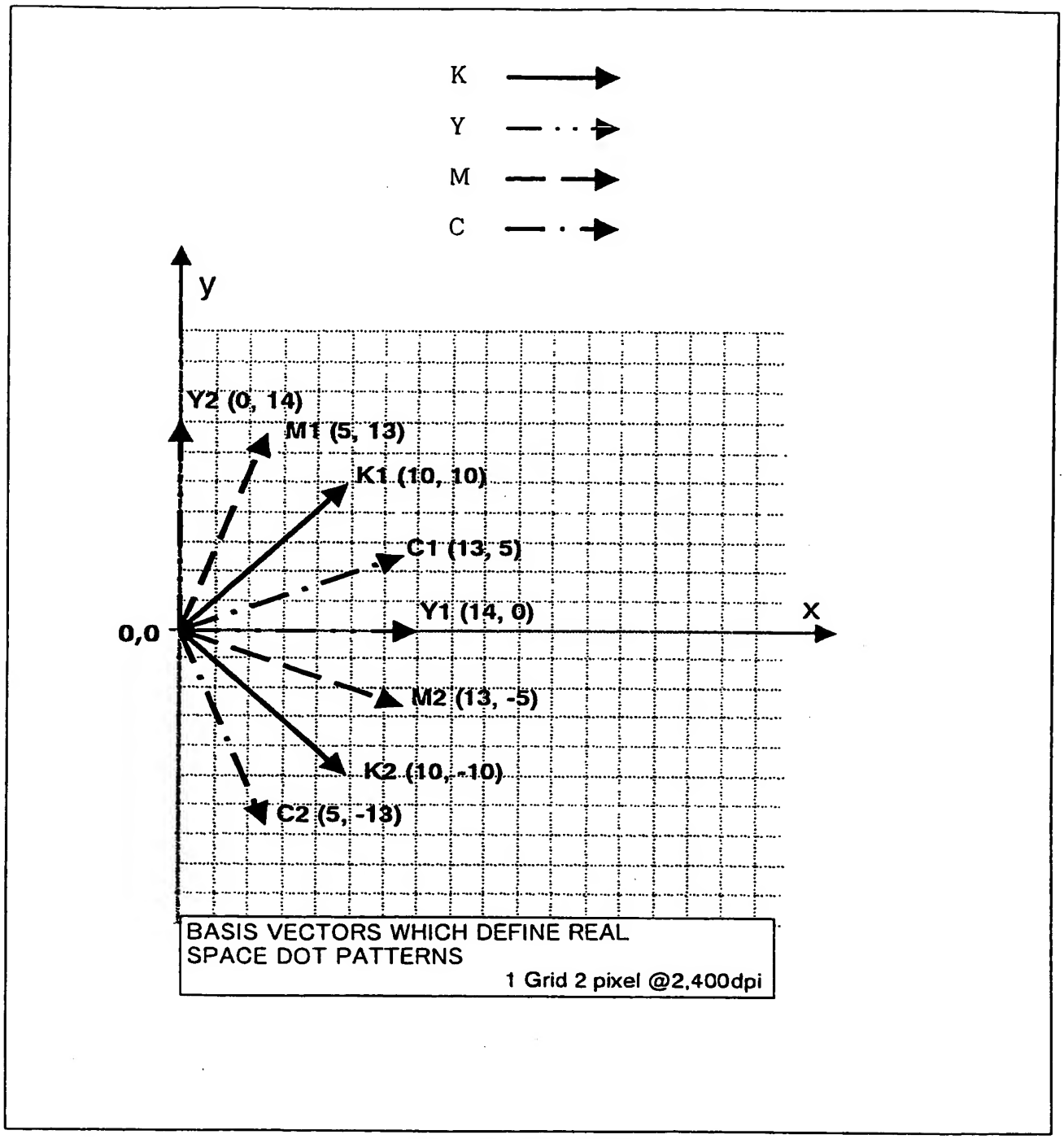


(4) K: Black

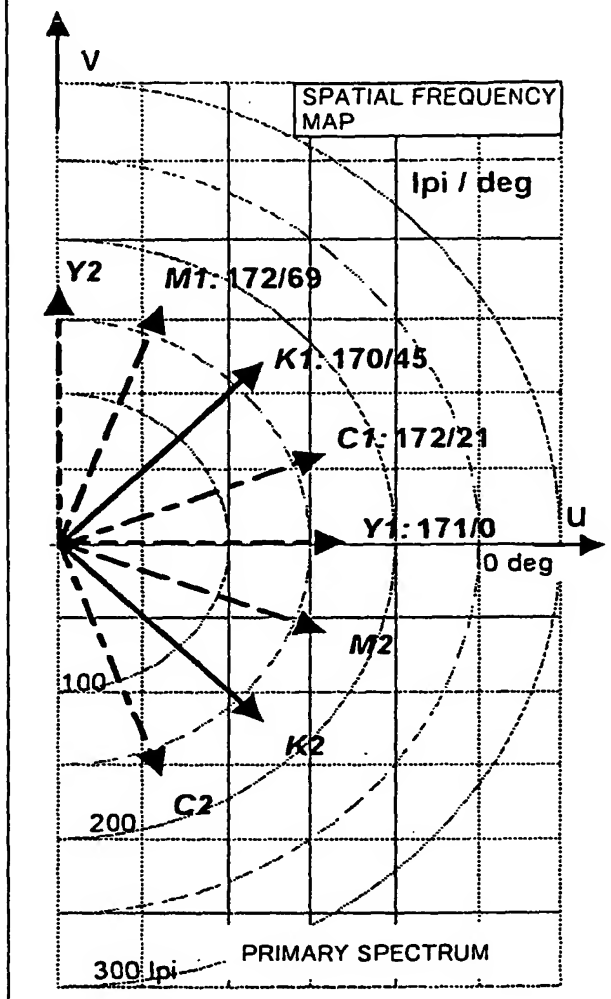
PRIOR ART
FIG. 4

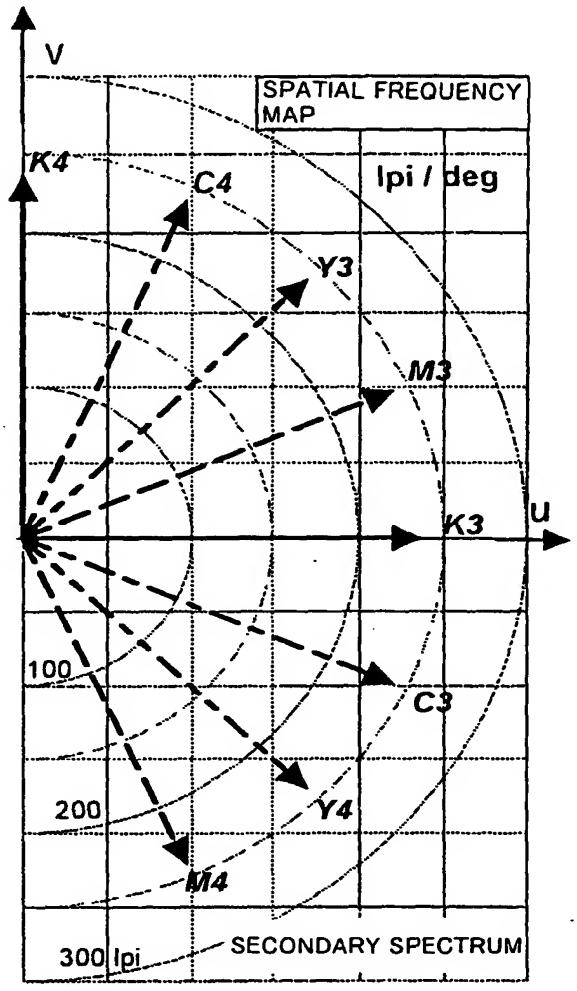


PRIOR ART
FIG. 5



PRIOR ART
FIG. 6





TYPICAL FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

Y1 - C1, Y1 - M2 63 lpi

M1 - K1, C1 - K1 71 lpi

Y1 - K3 69 lpi

K3 = K1+ K2, K4 = K1 - K2

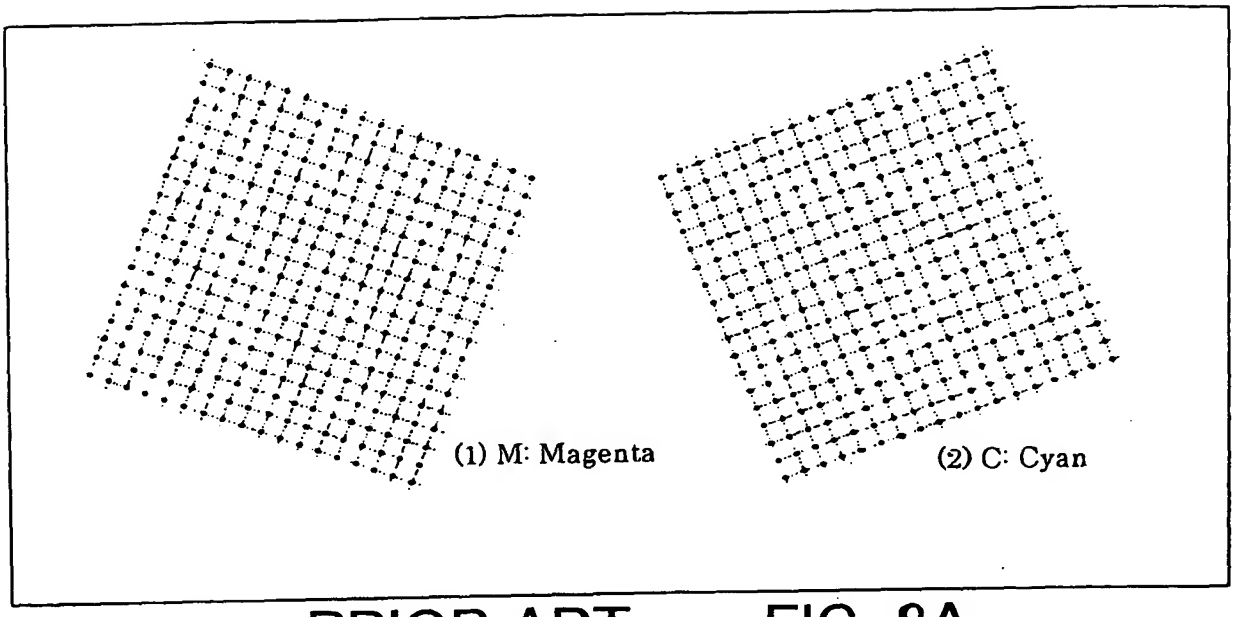
Y3 = Y1+ Y2, Y4 = Y1 - Y2

M3 = M1+ M2, M4 = - M1 + M2

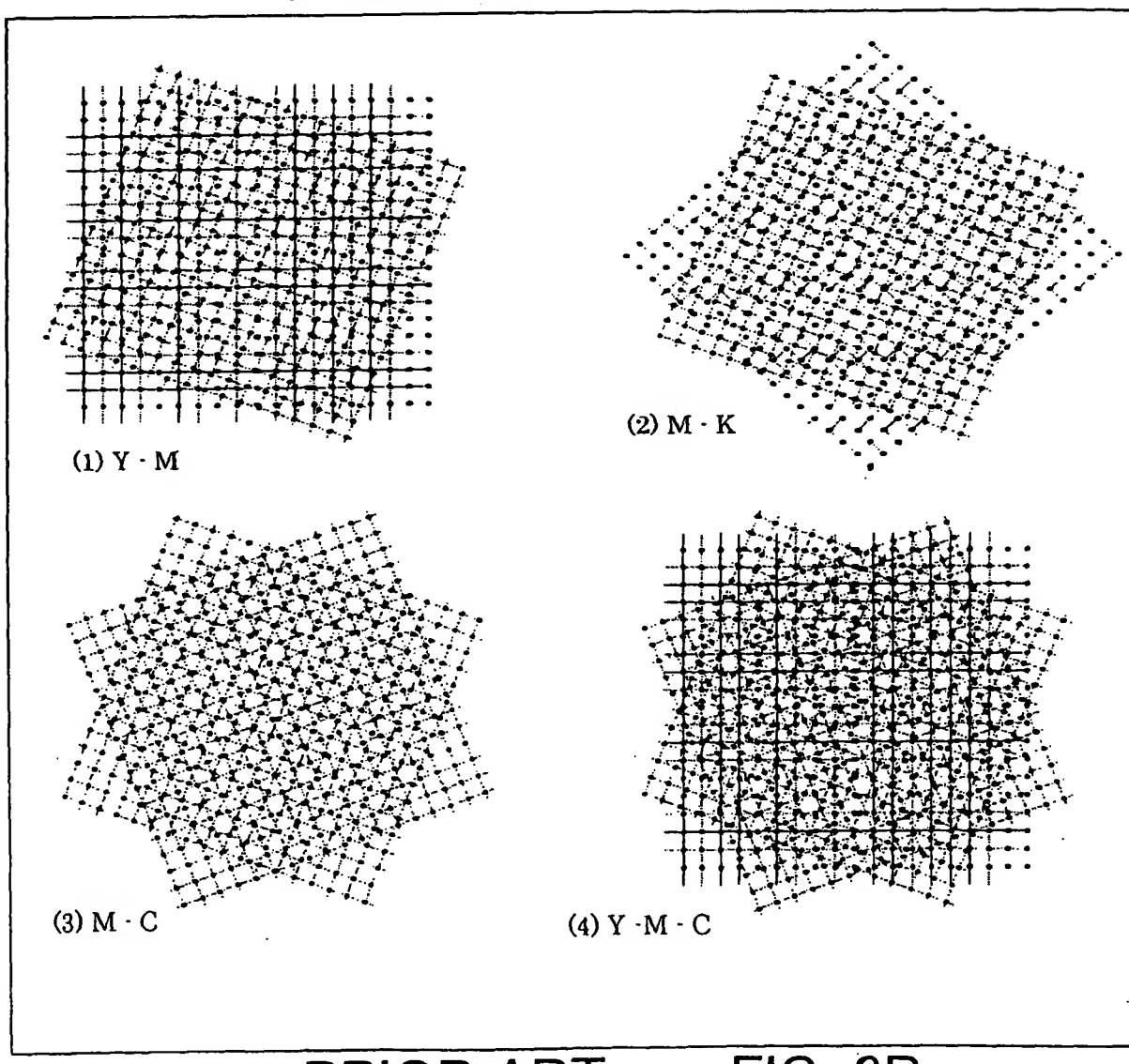
C3 = C1+ C2, C4 = C1 - C2

PRIOR ART

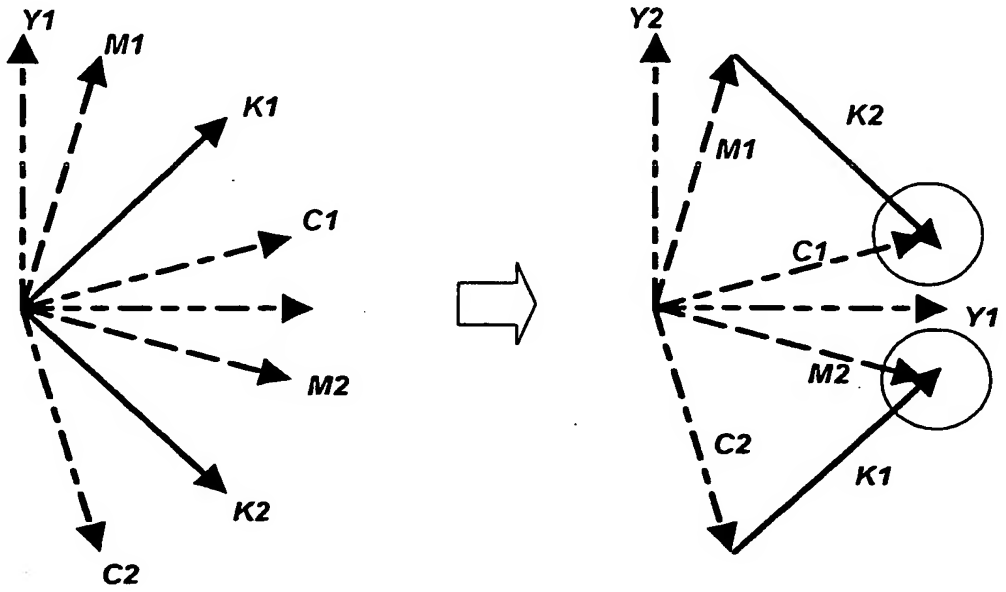
FIG. 7



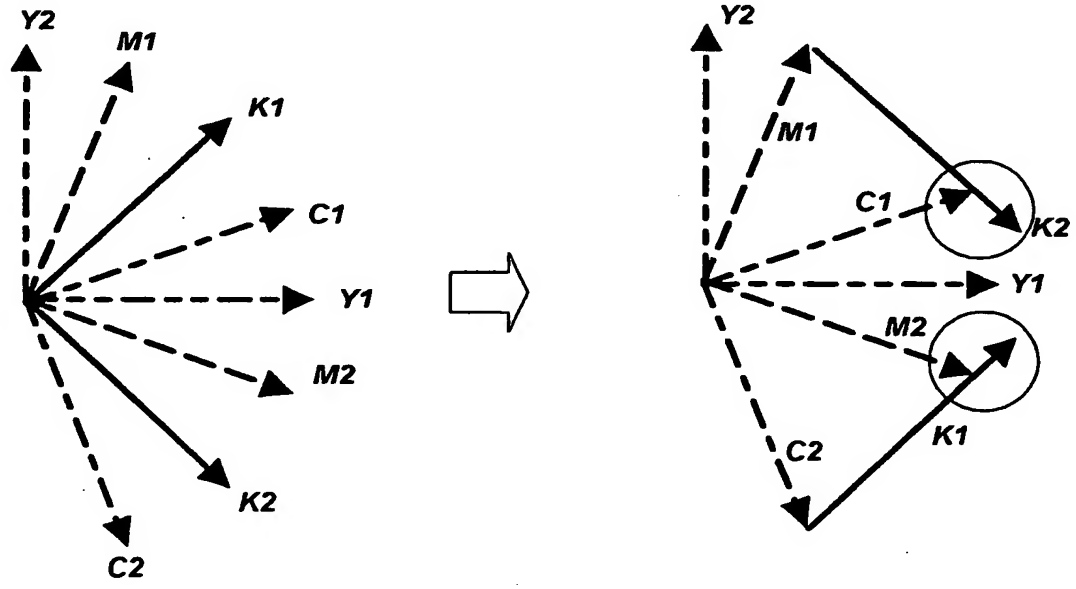
PRIOR ART FIG. 8A



PRIOR ART FIG. 8B

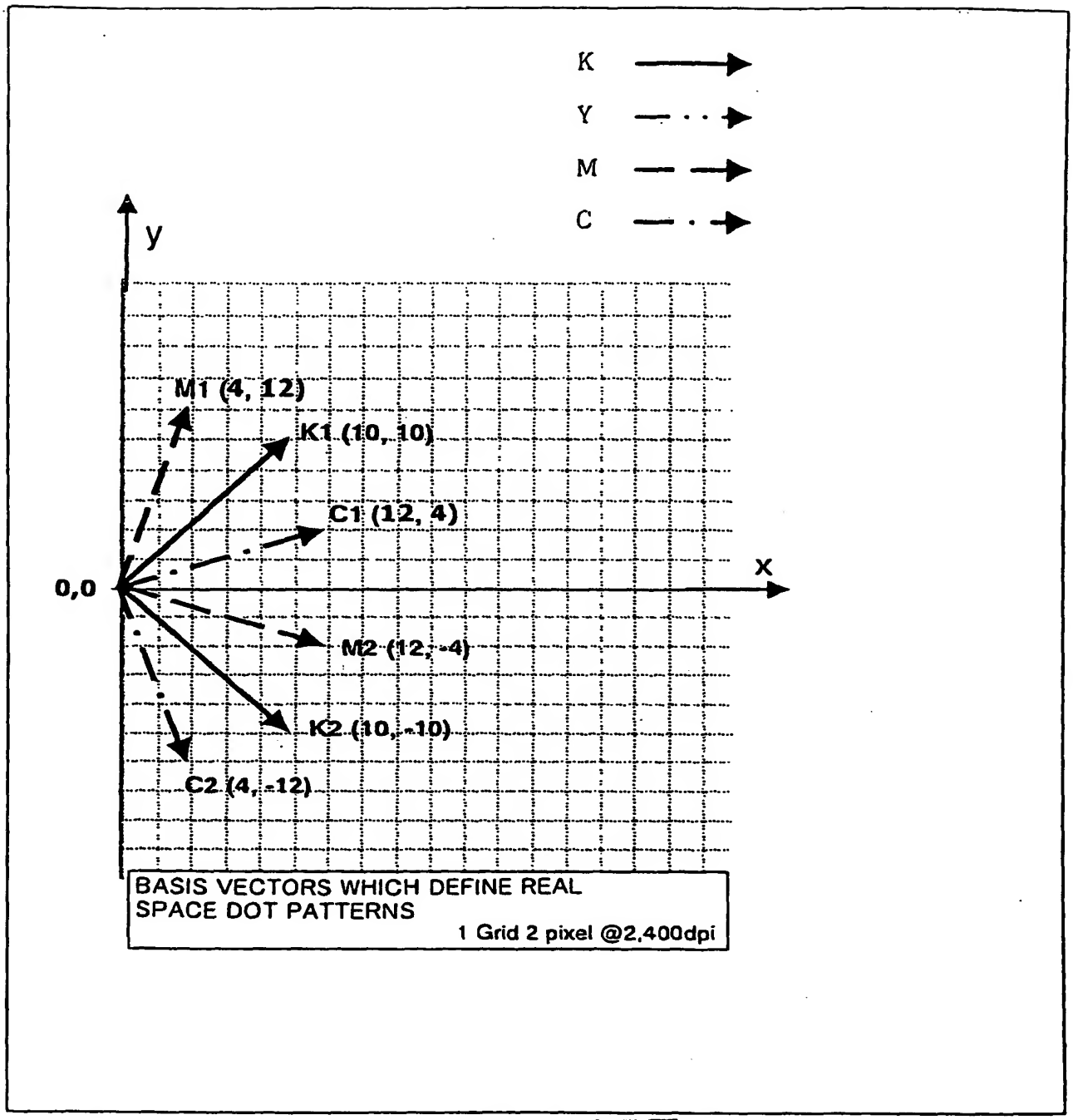


(a) 165 lpi PREFERENTIALLY M, C, K ARRANGED PATTERNS
(CORRESPONDING TO FIG. 2)

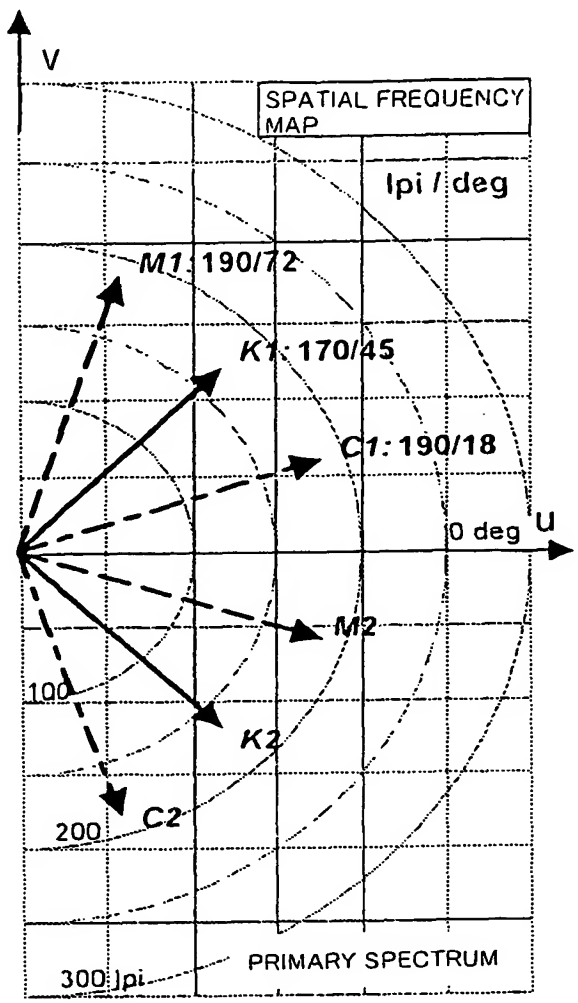


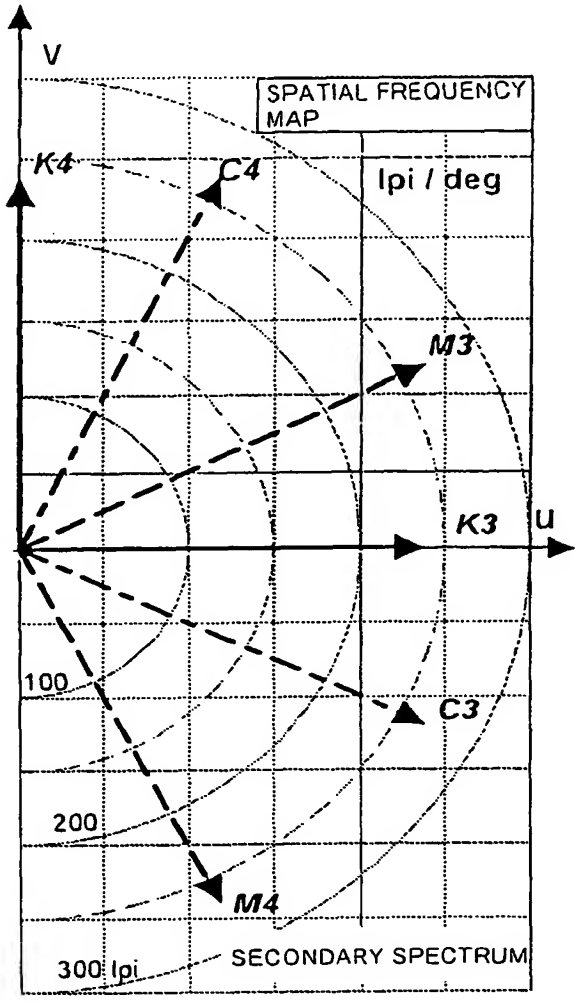
(b) 170 lpi EVENLY ARRANGED 4-COLOR PATTERNS
(CORRESPONDING TO FIG. 6)

PRIOR ART
FIG. 9



PRIOR ART
FIG. 10





TYPICAL FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

M1 - K1, C1 - K1, C1 - M2 85 lpi

85 lpi FOR EVERY SET OF TWO COLORS

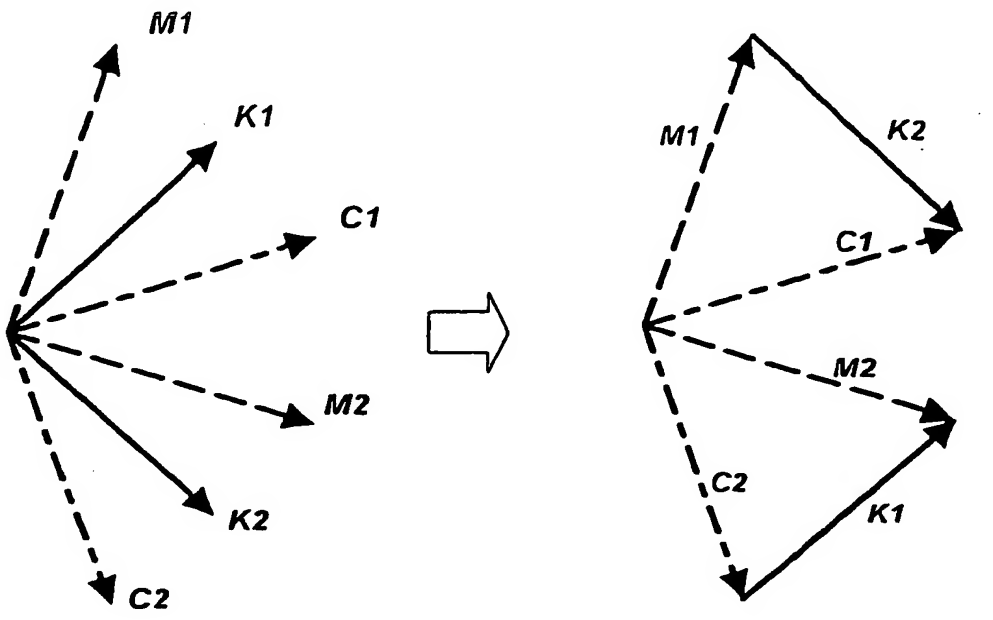
$K3 = K1 + K2,\ K4 = K1 - K2$

$M3 = M1 + M2,\ M4 = -M1 + M2$

$C3 = C1 + C2,\ C4 = C1 - C2$

PRIOR ART

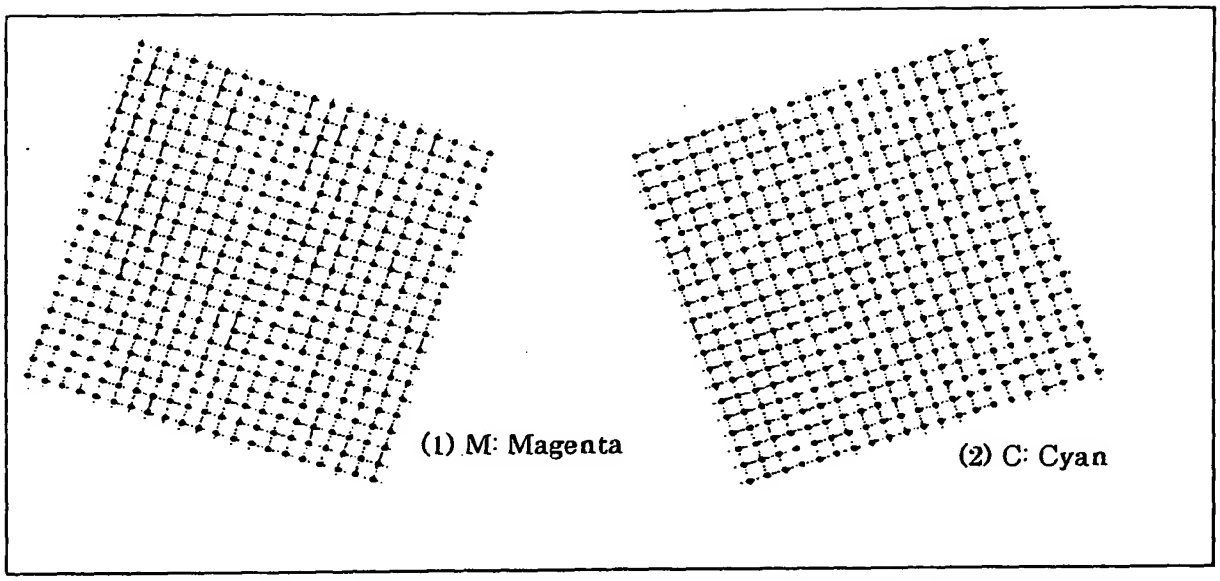
FIG. 11



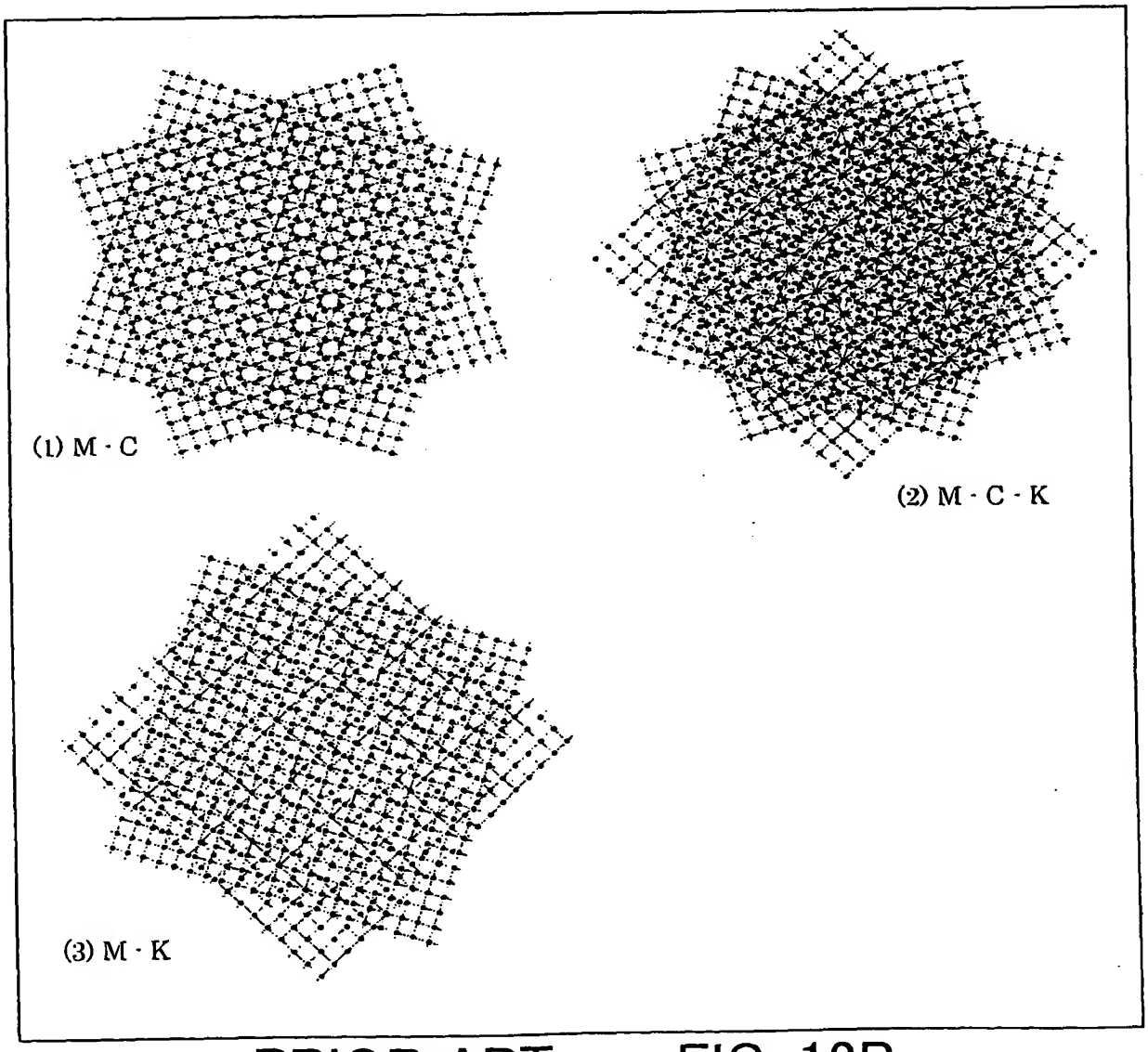
170 - 190 lpi ORTHOGONAL

M, C, K SPATIAL FREQUENCY MATCHING

PRIOR ART
FIG. 12



PRIOR ART FIG. 13A



PRIOR ART FIG. 13B

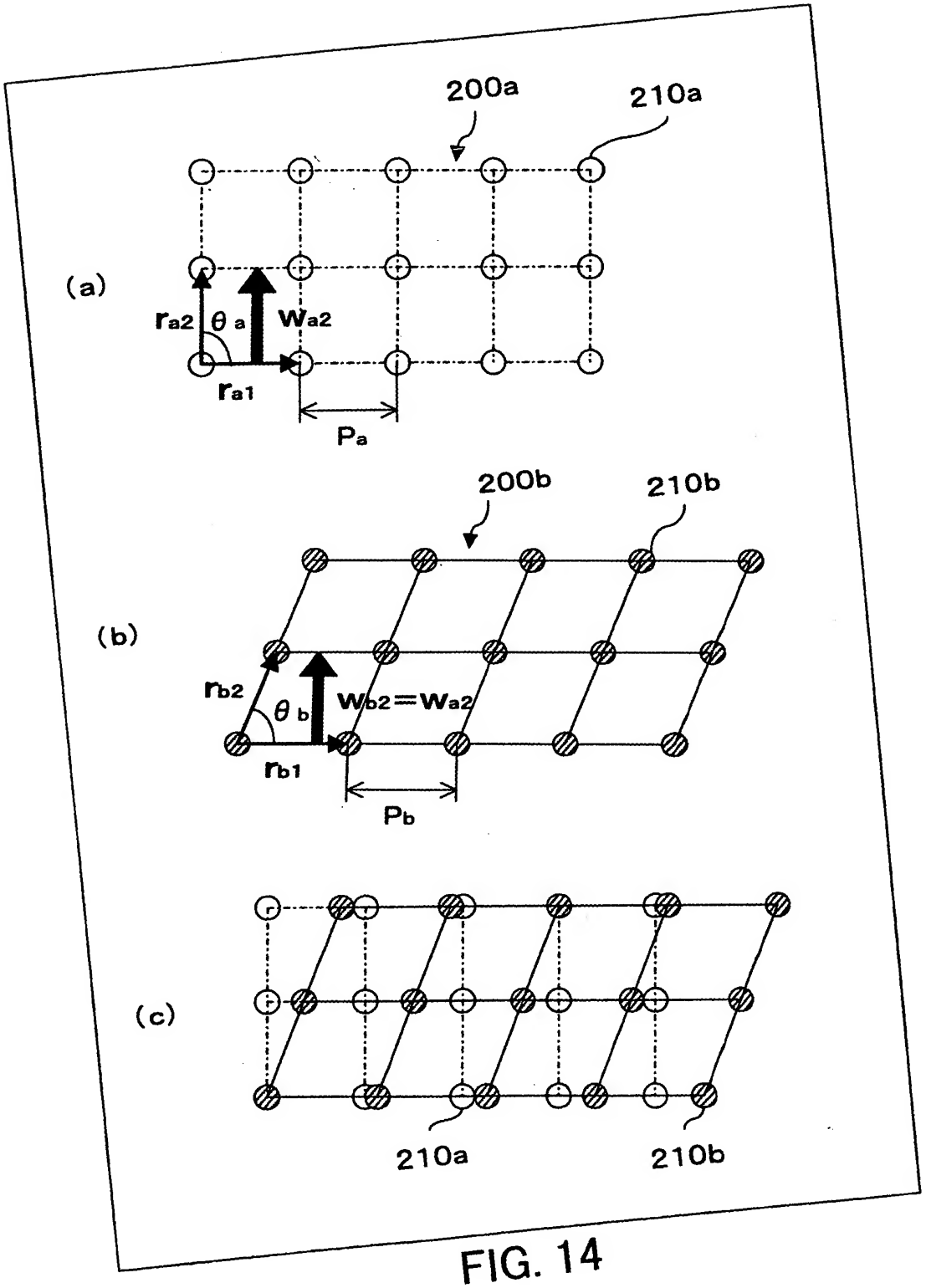

200a
210a
(a)
r_{a2}
θ_a
w_{a2}
r_{a1}
P_a
200b
210b
(b)
r_{b2}
θ_b
$w_{b2}=w_{a2}$
r_{b1}
P_b
(c)
210a
210b

FIG. 14

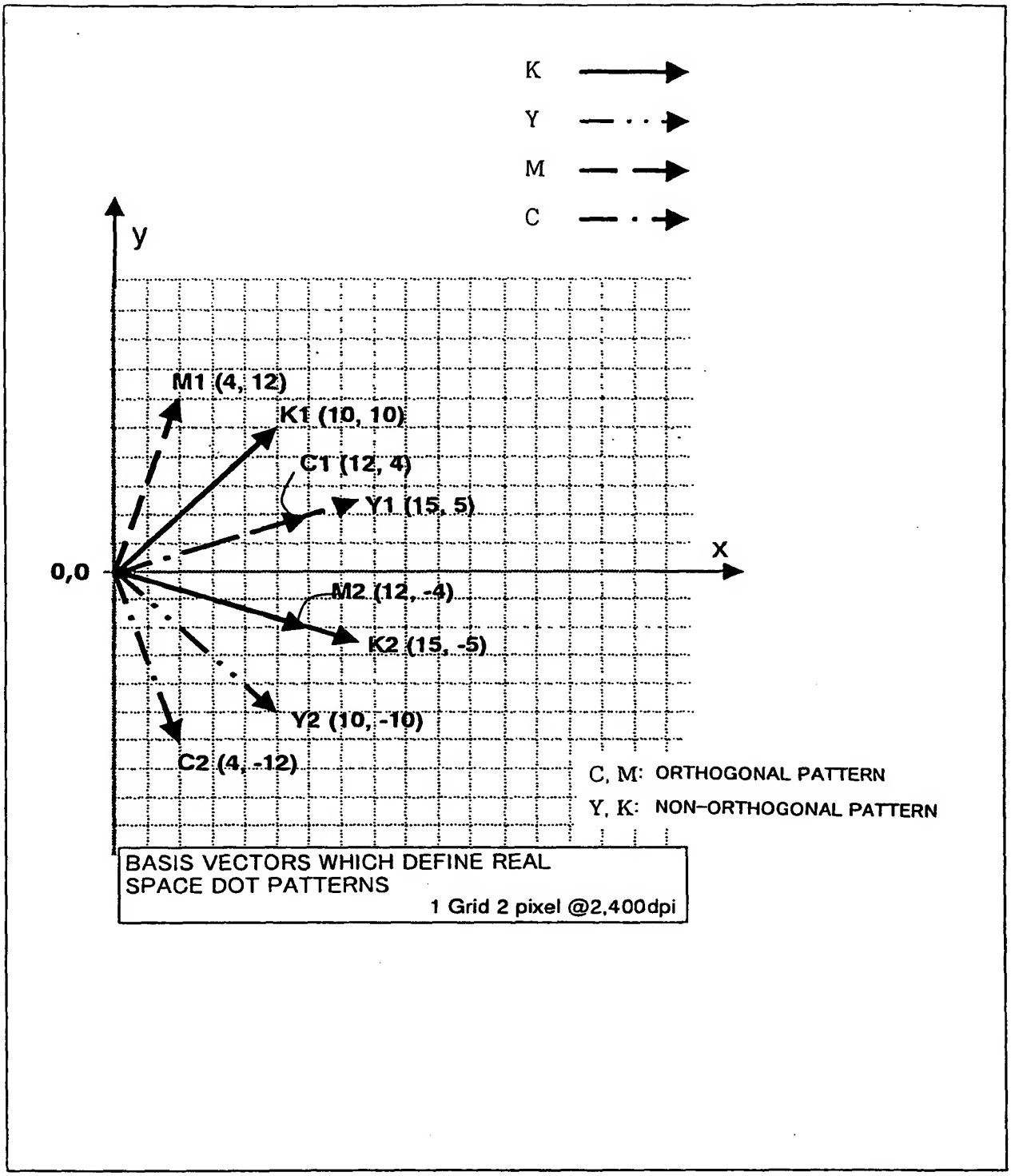
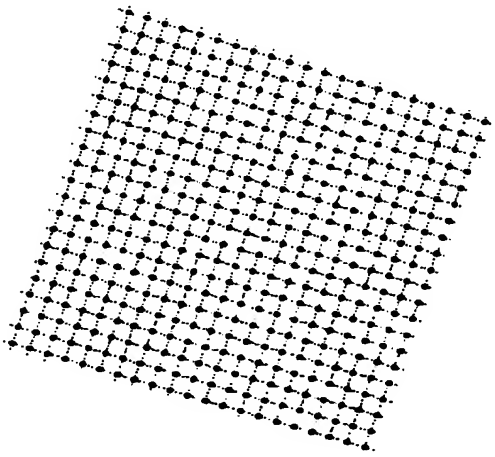
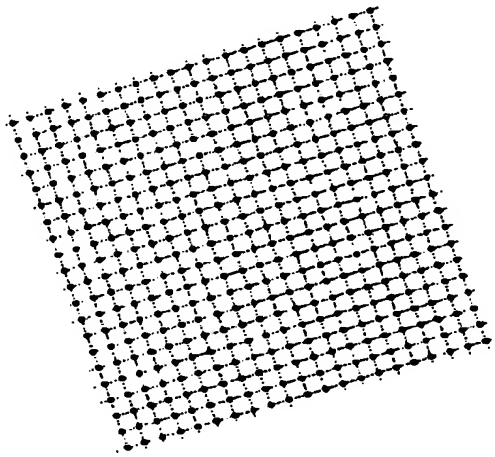

K
Y
M
C
y
x
0,0
M1 (4, 12)
K1 (10, 10)
C1 (12, 4)
Y1 (15, 5)
M2 (12, -4)
K2 (15, -5)
Y2 (10, -10)
C2 (4, -12)
C, M: ORTHOGONAL PATTERN
Y, K: NON-ORTHOGONAL PATTERN
BASIS VECTORS WHICH DEFINE REAL SPACE DOT PATTERNS
1 Grid 2 pixel @2,400dpi

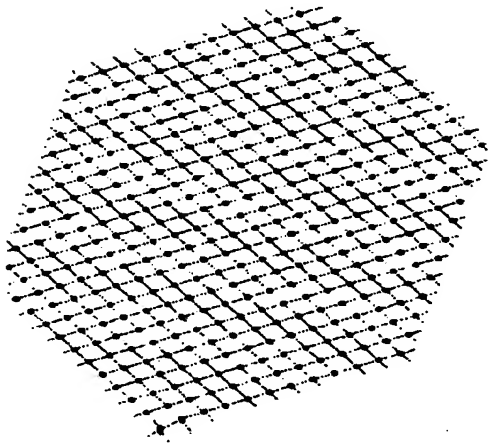
FIG. 15



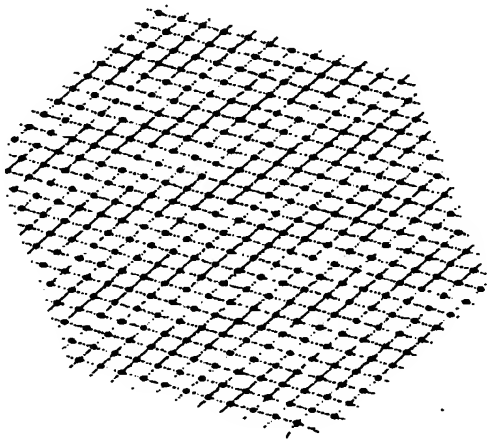
(1) M: Magenta



(2) C: Cyan

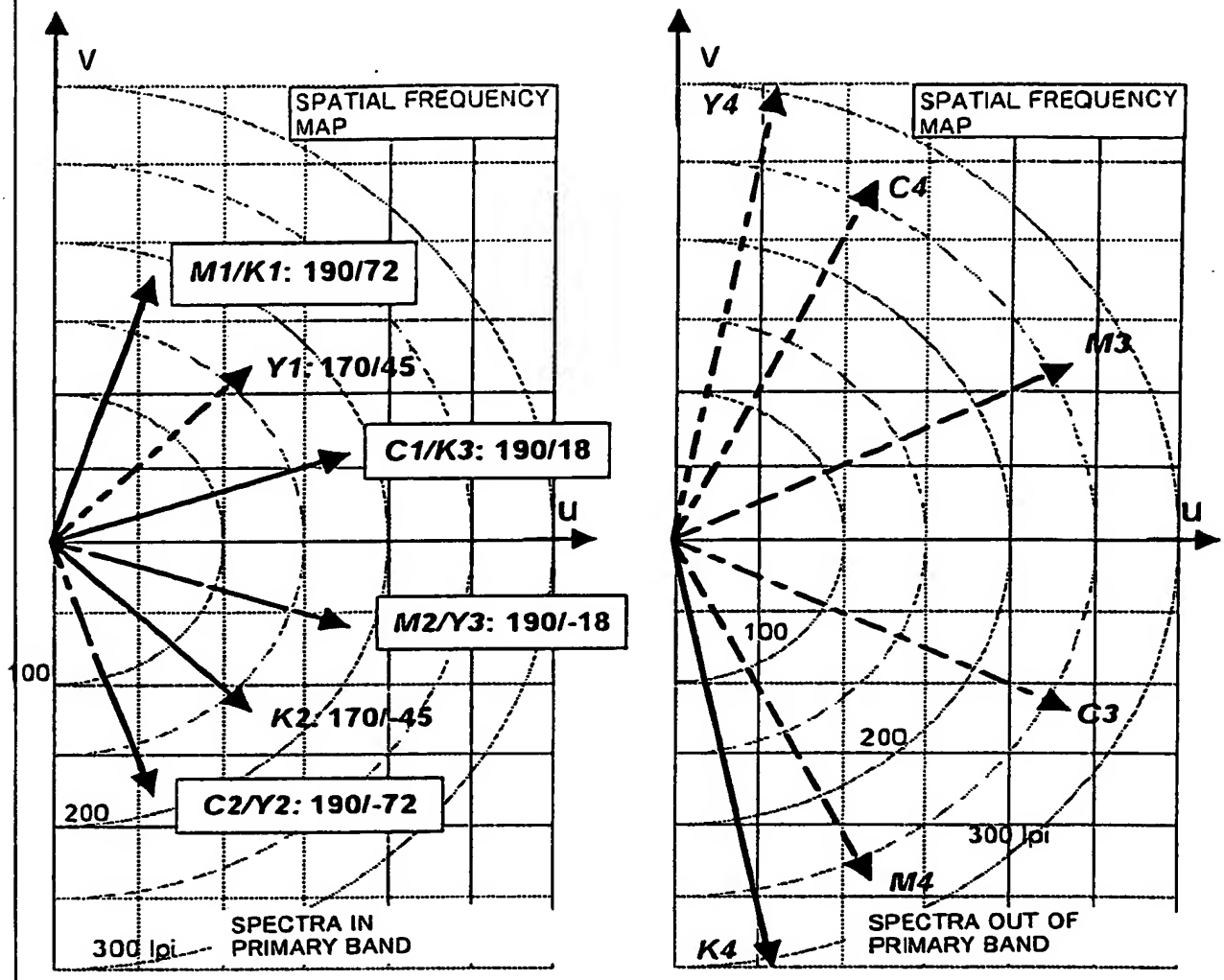


(3) Y: Yellow



(4) K: Black

FIG. 16



FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

85 lpi FOR EVERY SET OF TWO COLORS

$K3 = K1 + K2,\ K4 = -K1 + K2$

$Y3 = Y1 + Y2,\ Y4 = Y1 - Y2$

$M3 = M1 + M2,\ M4 = -M1 + M2$

$C3 = C1 + C2,\ C4 = C1 - C2$

FIG. 17

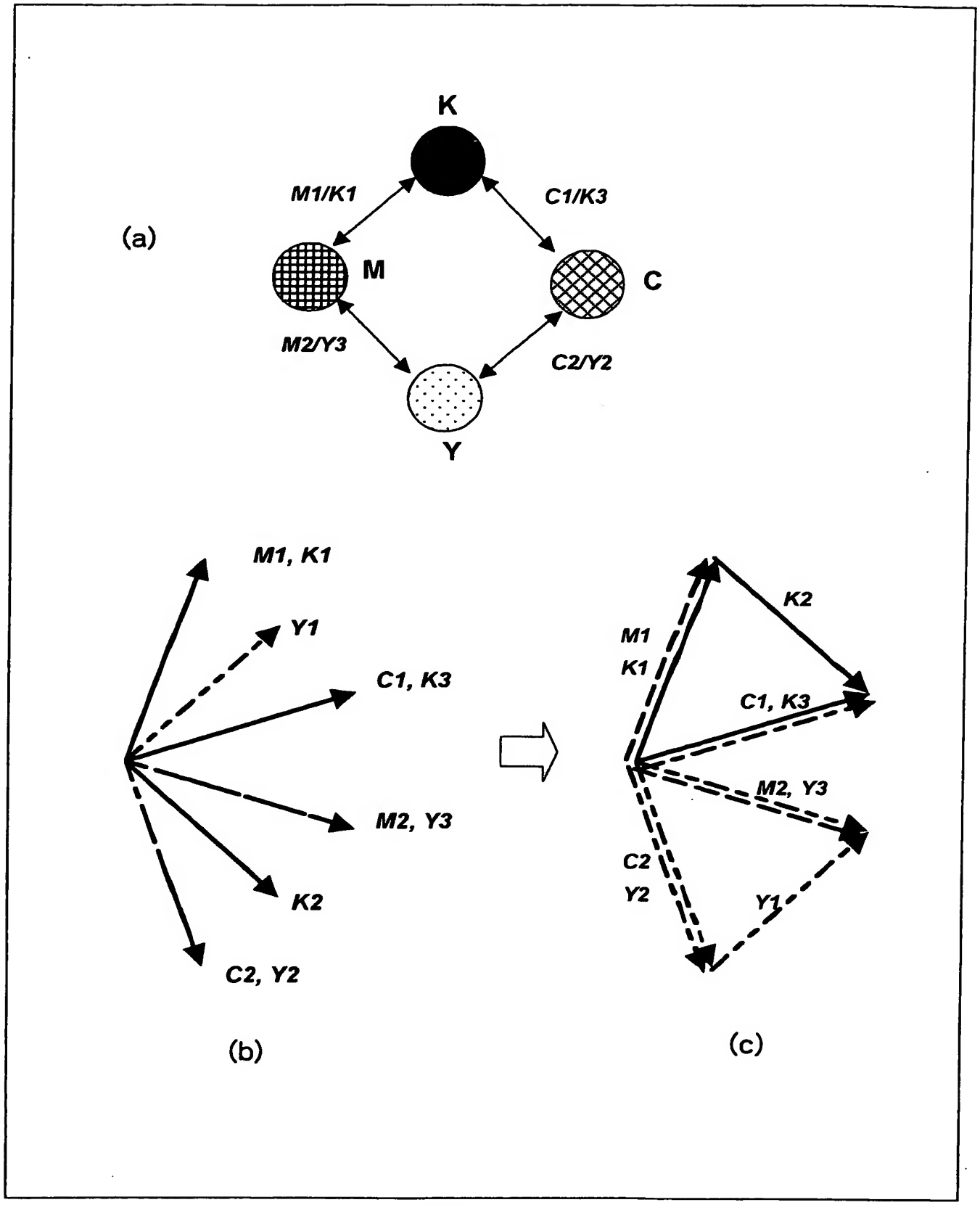

(a)
K
M1/K1
C1/K3
M
C
M2/Y3
C2/Y2
Y
M1, K1
Y1
C1, K3
M2, Y3
K2
C2, Y2
(b)
K2
M1
K1
C1, K3
M2, Y3
C2
Y2
Y1
(c)

FIG. 18

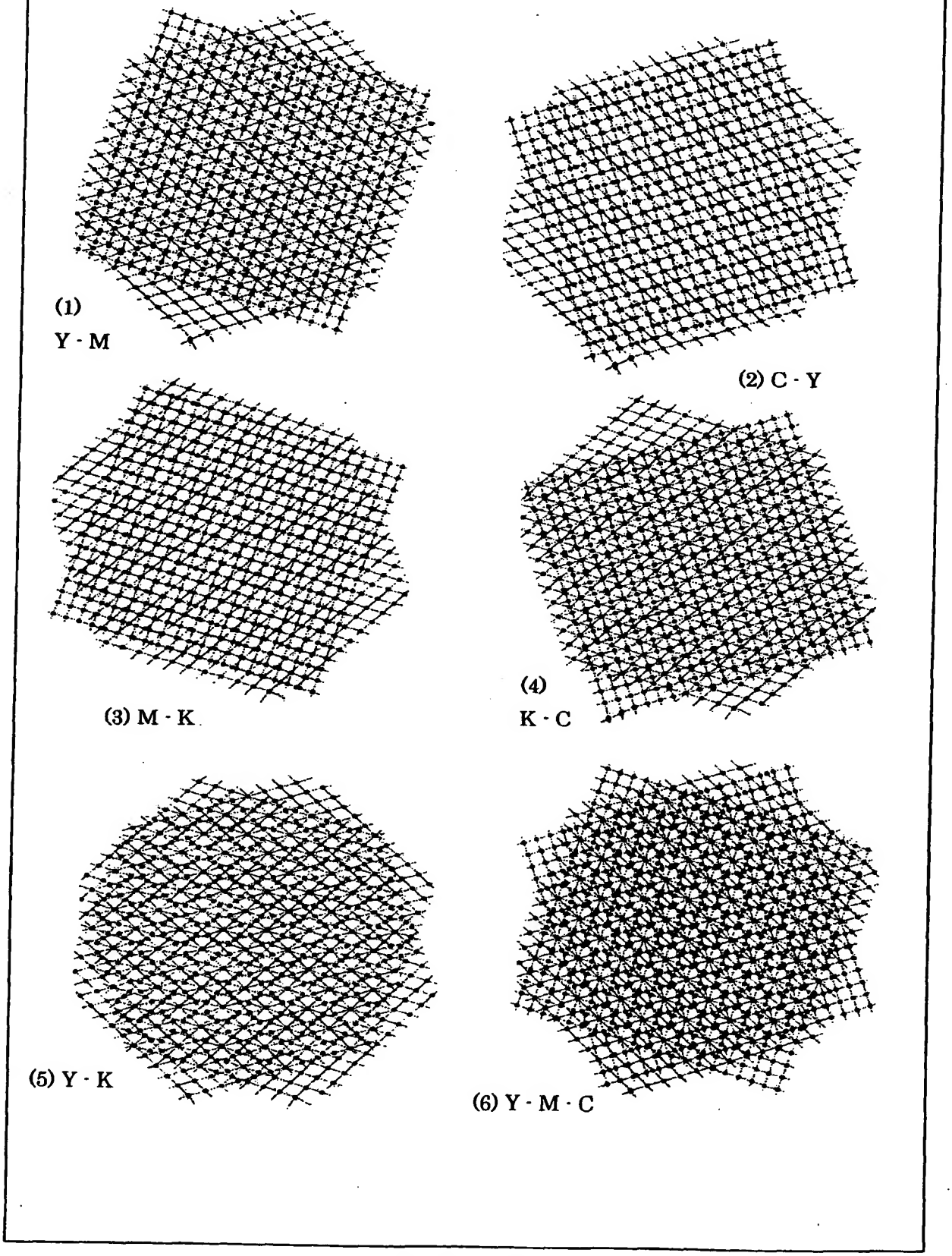


FIG. 19

FIG. 20A

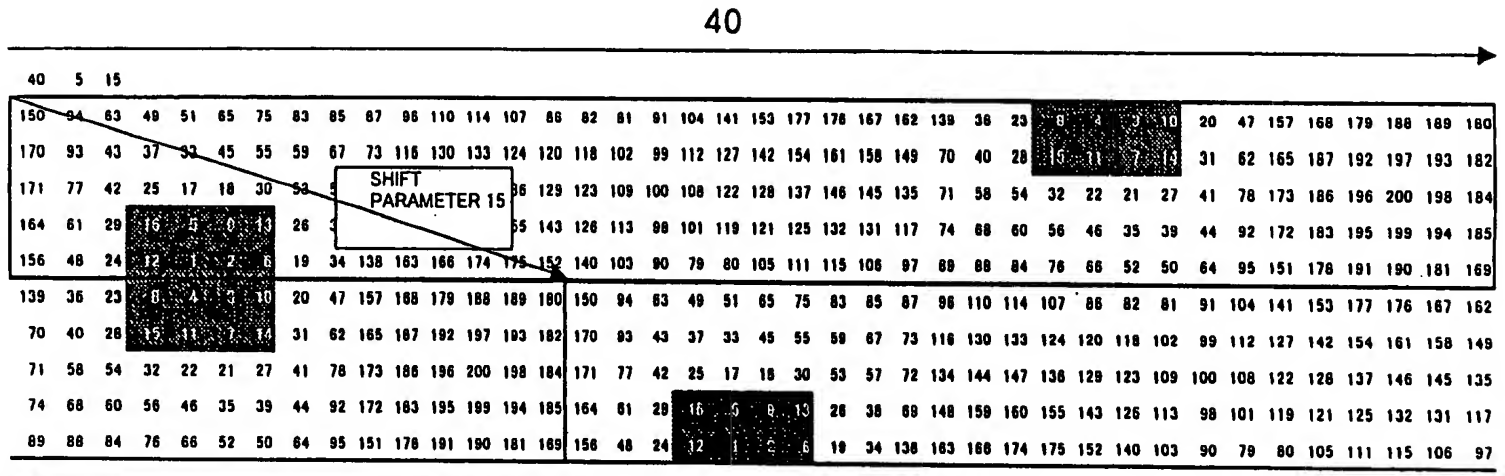
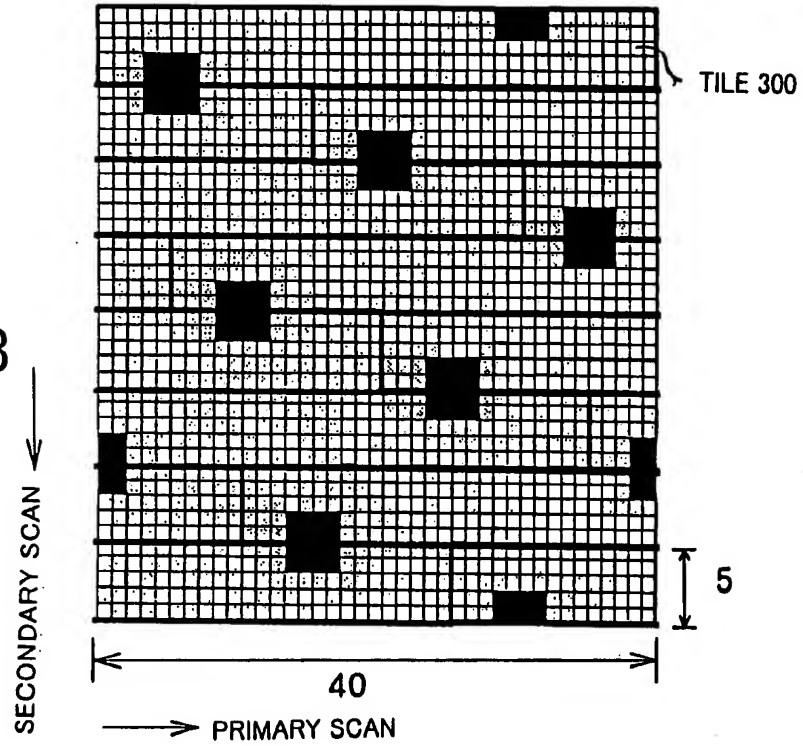


FIG. 20B



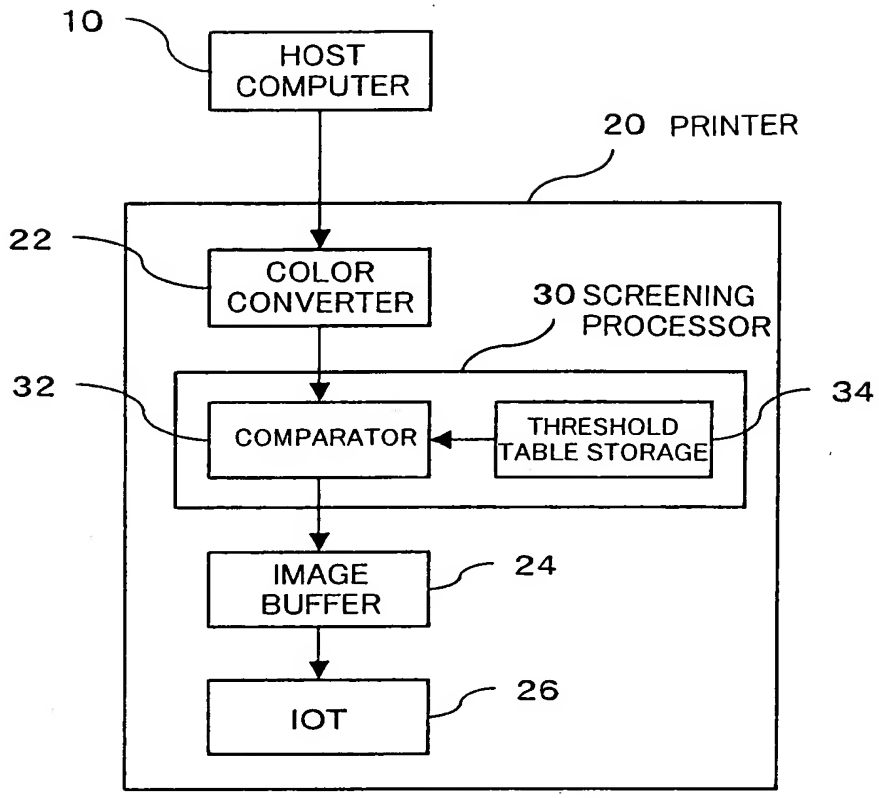

10
HOST COMPUTER
20 PRINTER
22
COLOR CONVERTER
30 SCREENING PROCESSOR
32
COMPARATOR
THRESHOLD TABLE STORAGE
34
IMAGE BUFFER
24
IOT
26

FIG. 21

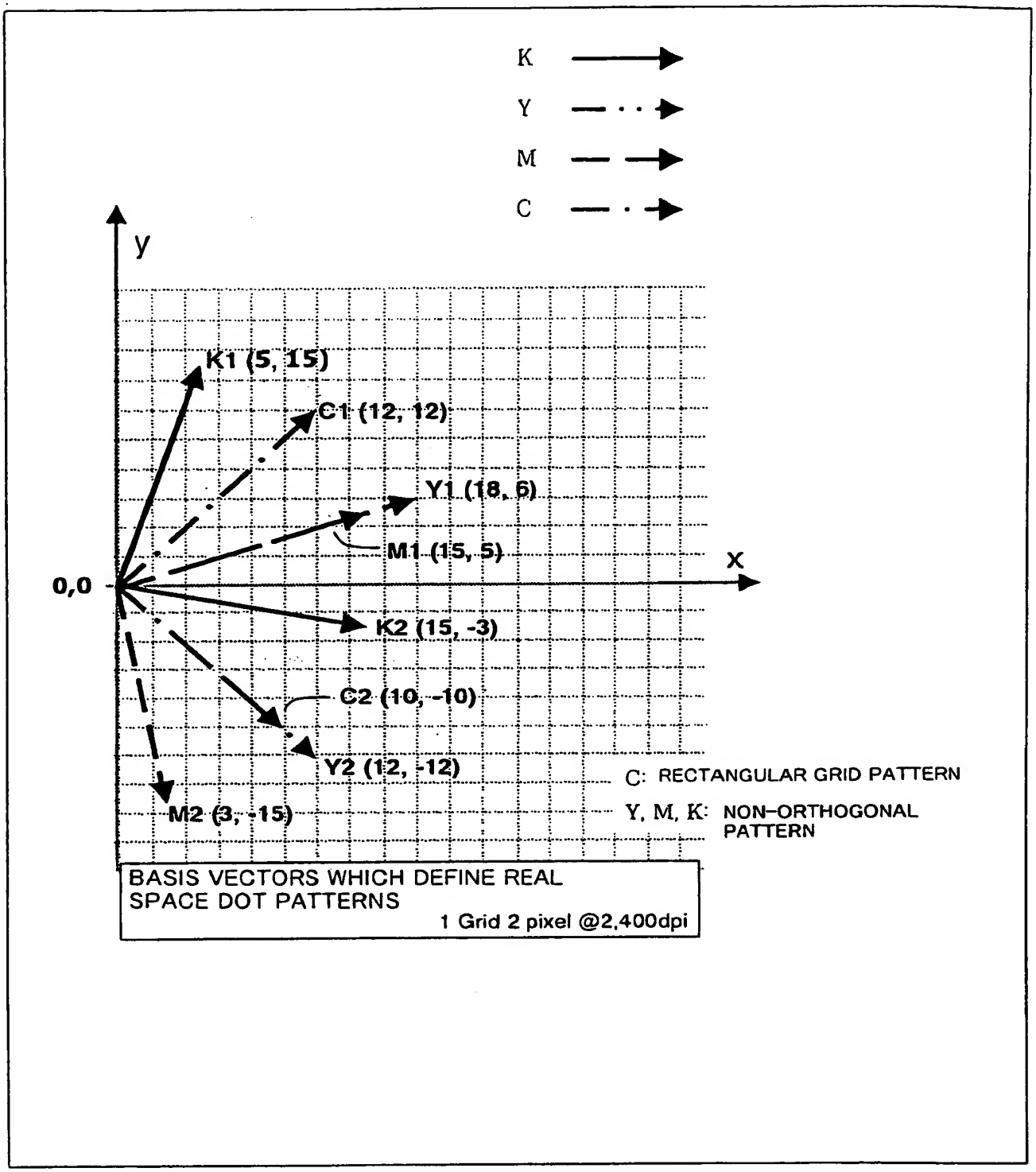
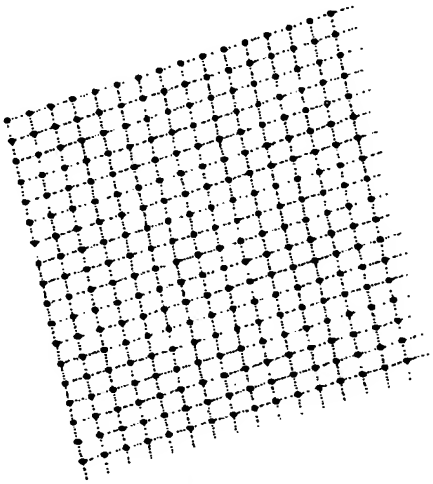
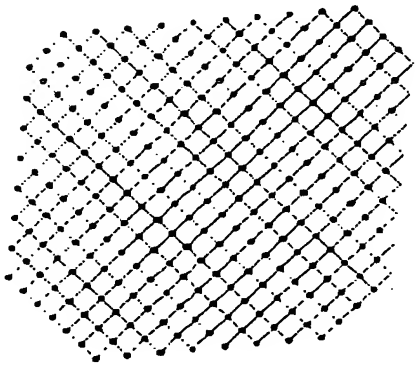

K
Y
M
C
y
x
0,0
K1 (5, 15)
C1 (12, 12)
Y1 (18, 6)
M1 (15, 5)
K2 (15, -3)
C2 (10, -10)
Y2 (12, -12)
M2 (3, -15)
C: RECTANGULAR GRID PATTERN
Y, M, K: NON-ORTHOGONAL PATTERN
BASIS VECTORS WHICH DEFINE REAL SPACE DOT PATTERNS
1 Grid 2 pixel @2,400dpi

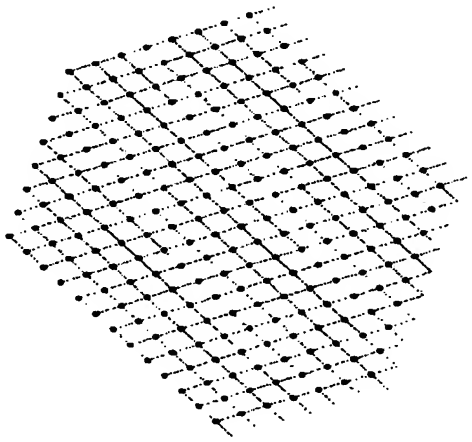
FIG. 22



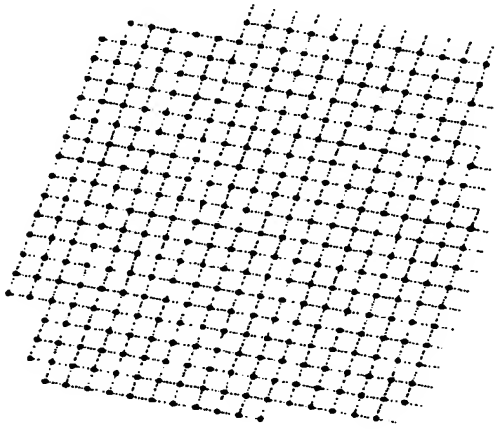
(1) M: Magenta



(2) C: Cyan

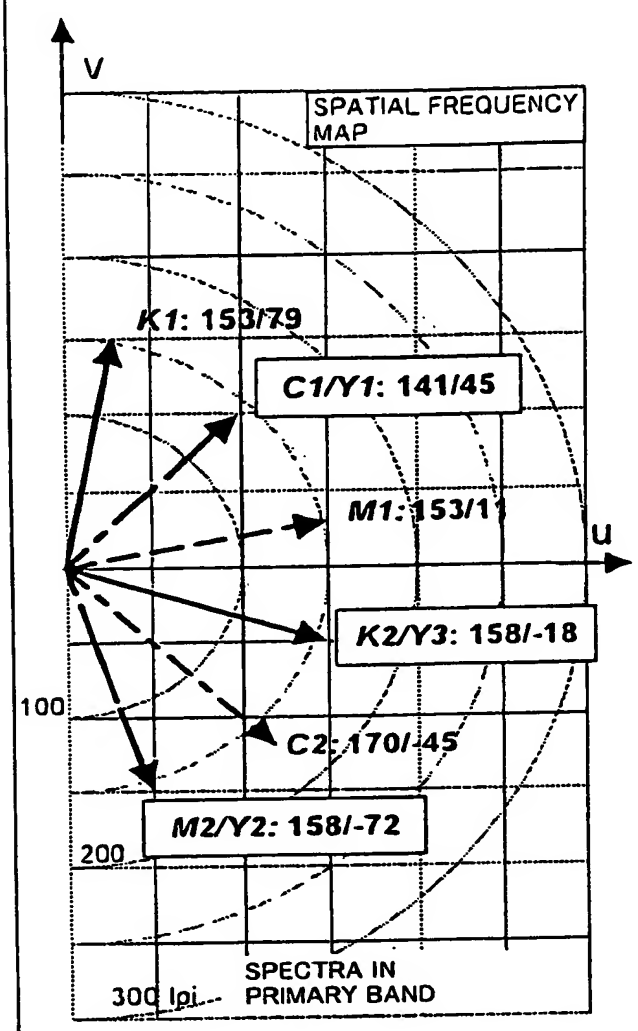


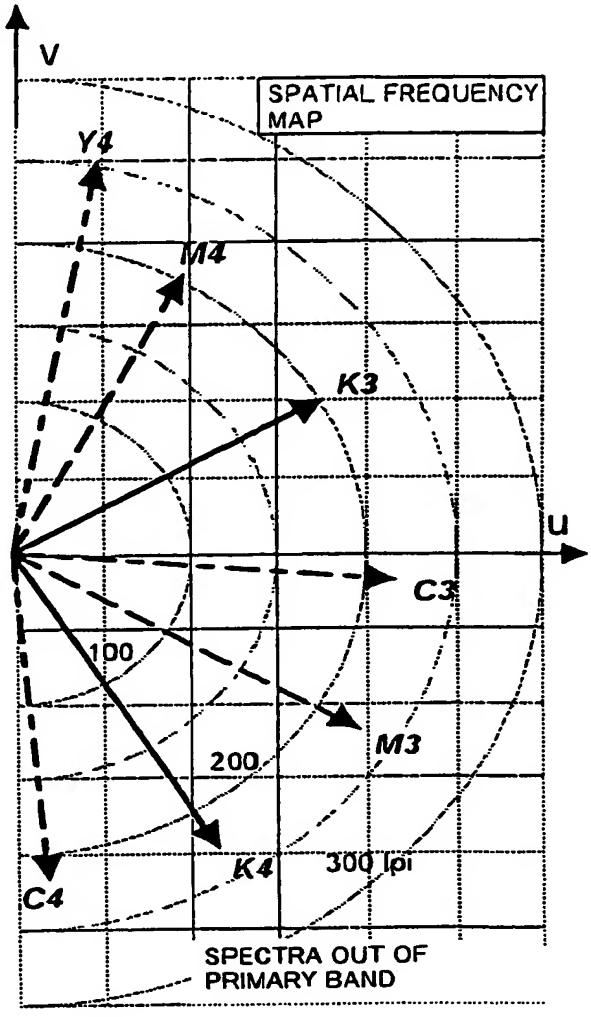
(3) Y: Yellow



(4) K: Black

FIG. 23





TYPICAL FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

C1/Y1 - M4	80 lpi
C1/Y1 - K1	86 lpi
K1 - M4	76 lpi
K2/Y3 - C3, K2/Y3 - C2	76 lpi

$K3 = K1 + K2,\ K4 = -K1 + K2$

$Y3 = Y1 + Y2,\ Y4 = Y1 - Y2$

$M3 = M1 + M2,\ M4 = M1 - M2$

$C3 = C1 + C2,\ C4 = -C1 + C2$

FIG. 24

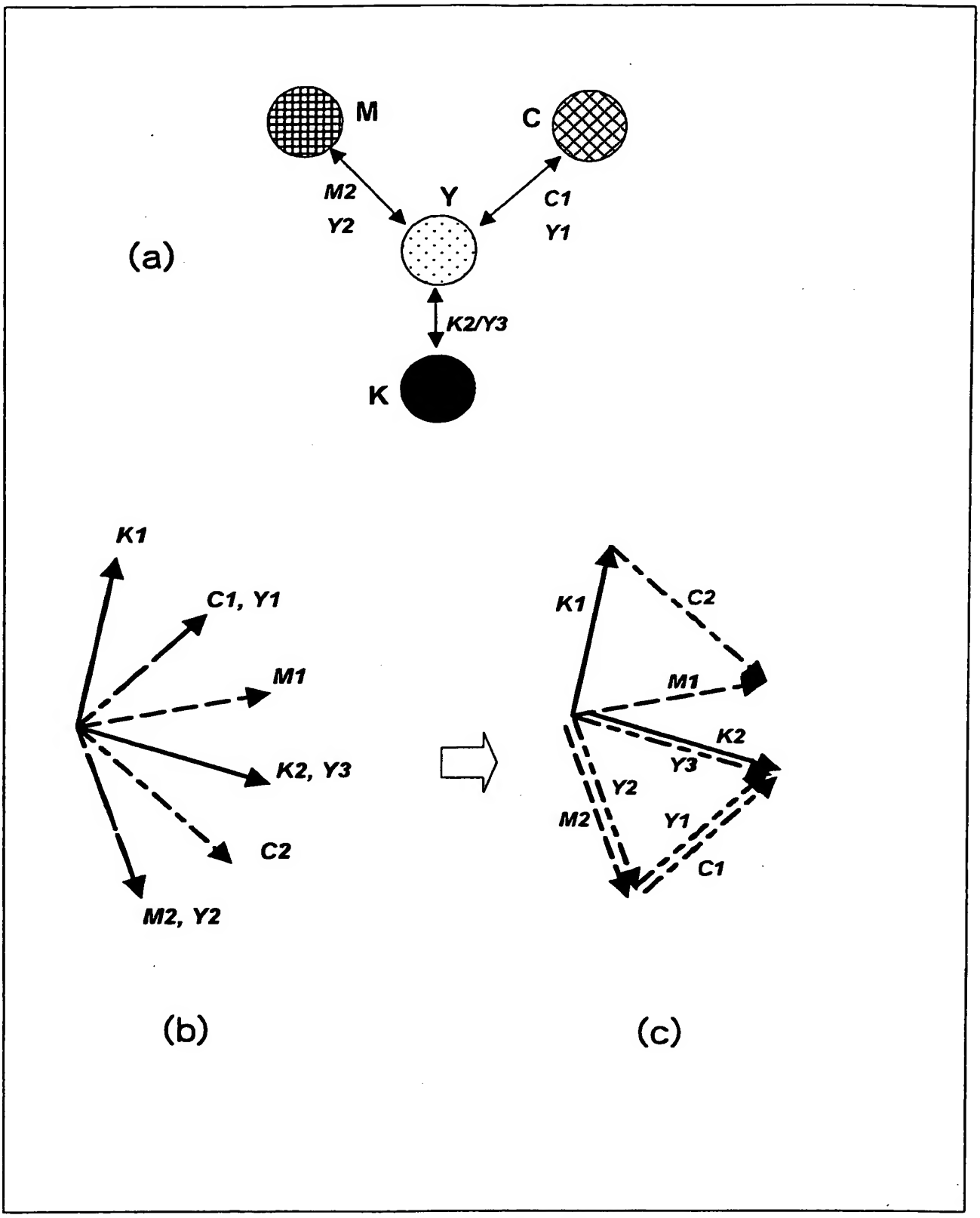

(a)
M
C
Y
M2
Y2
C1
Y1
K2/Y3
K
(b)
K1
C1, Y1
M1
K2, Y3
C2
M2, Y2
(c)
K1
C2
M1
K2
Y3
Y2
M2
Y1
C1

FIG. 25

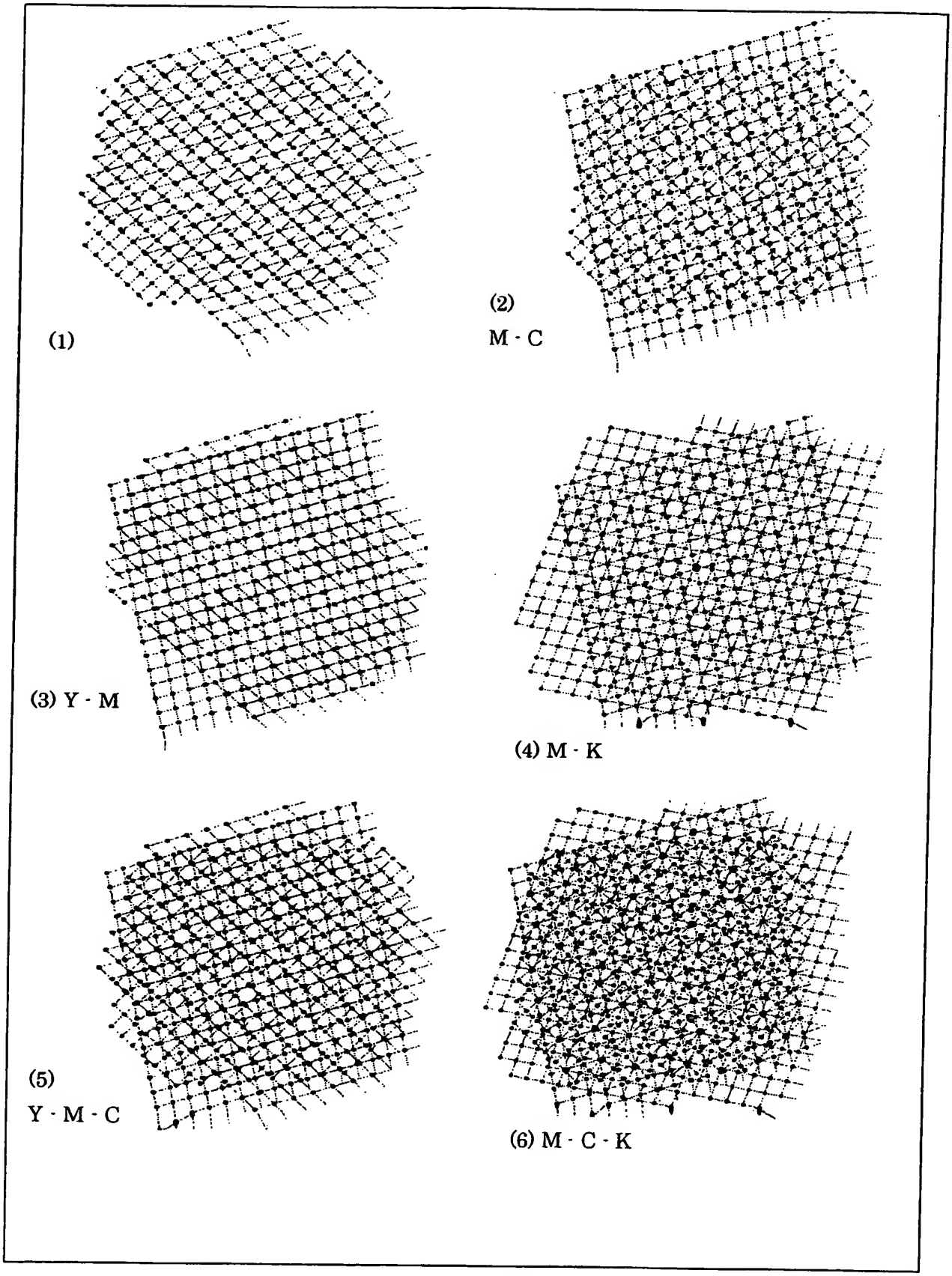


FIG. 26

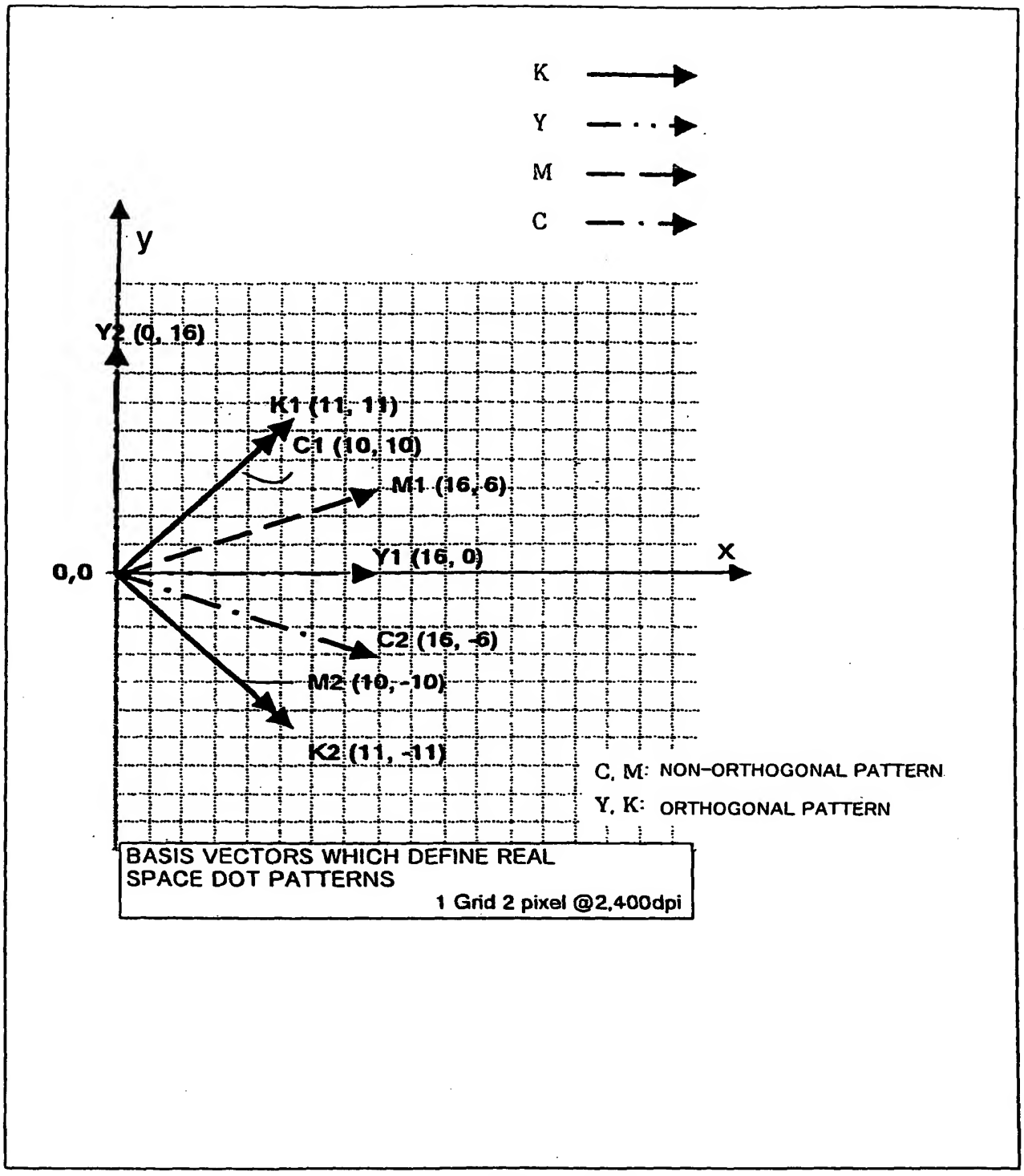
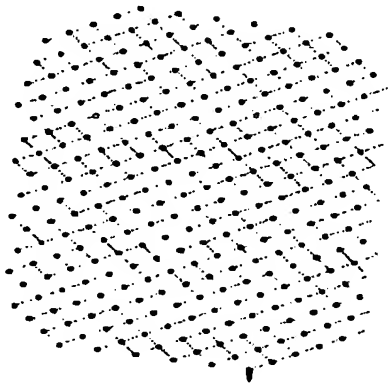
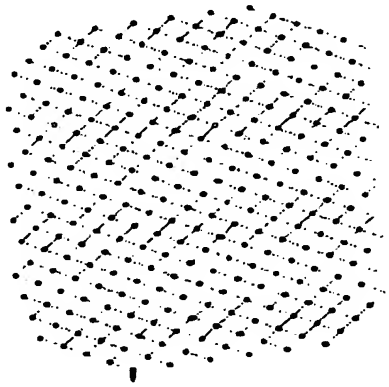

K
Y
M
C
y
Y2 (0, 16)
K1 (11, 11)
C1 (10, 10)
M1 (16, 6)
0,0
Y1 (16, 0)
x
C2 (16, -6)
M2 (10, -10)
K2 (11, -11)
C, M: NON-ORTHOGONAL PATTERN
Y, K: ORTHOGONAL PATTERN
BASIS VECTORS WHICH DEFINE REAL SPACE DOT PATTERNS
1 Grid 2 pixel @2,400dpi

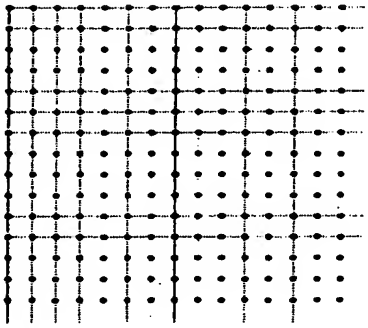
FIG. 27



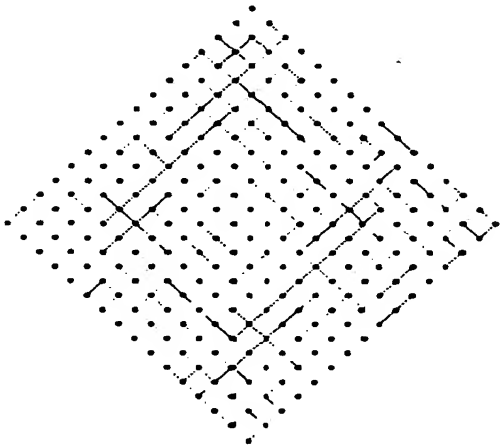
(1) M: Magenta



(2) C: Cyan

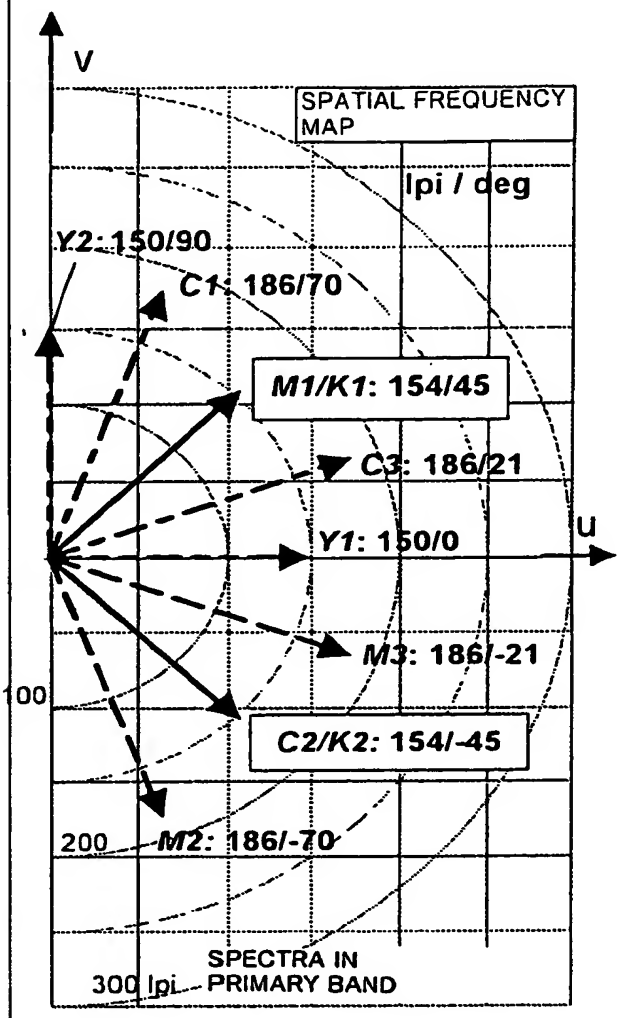


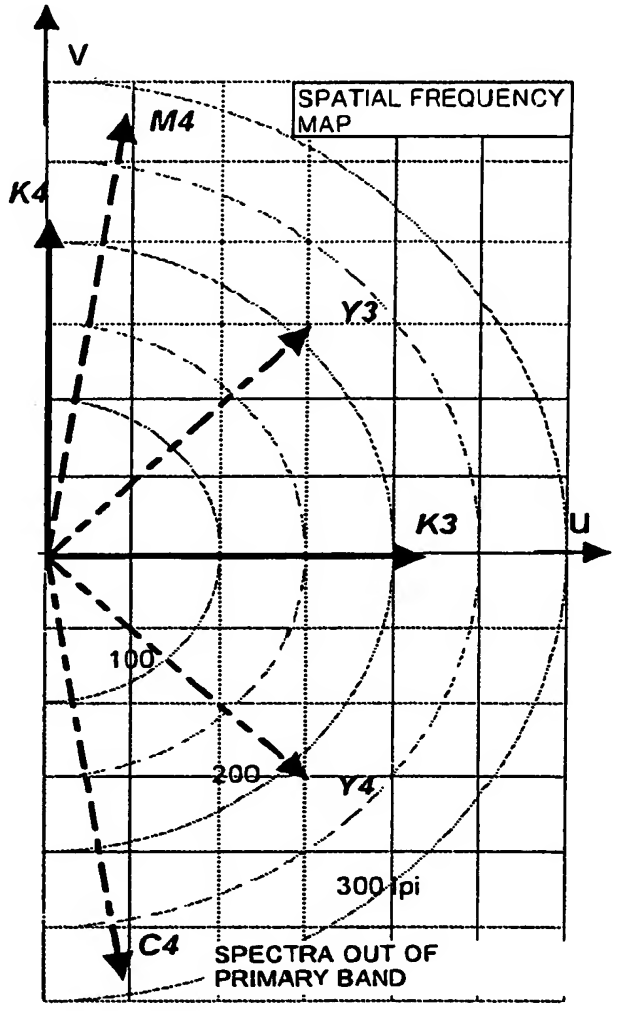
(3) Y: Yellow



(4) K: Black

FIG. 28





TYPICAL FREQUENCY OF MOIRÉ BETWEEN TWO COLORS

Y1 - K3, Y2 - K4	68 lpi
Y1 - C3	70 lpi
Y3 - M1/K1	58 lpi
M1/K1 - C1	79 lpi

K3 = K1 + K2, K4 = K1 - K2
Y3 = Y1 + Y2, Y4 = Y1 - Y2
M3 = M1 + M2, M4 = M1 - M2
C3 = C1+ C2, C4 = - C1 + C2

FIG. 29

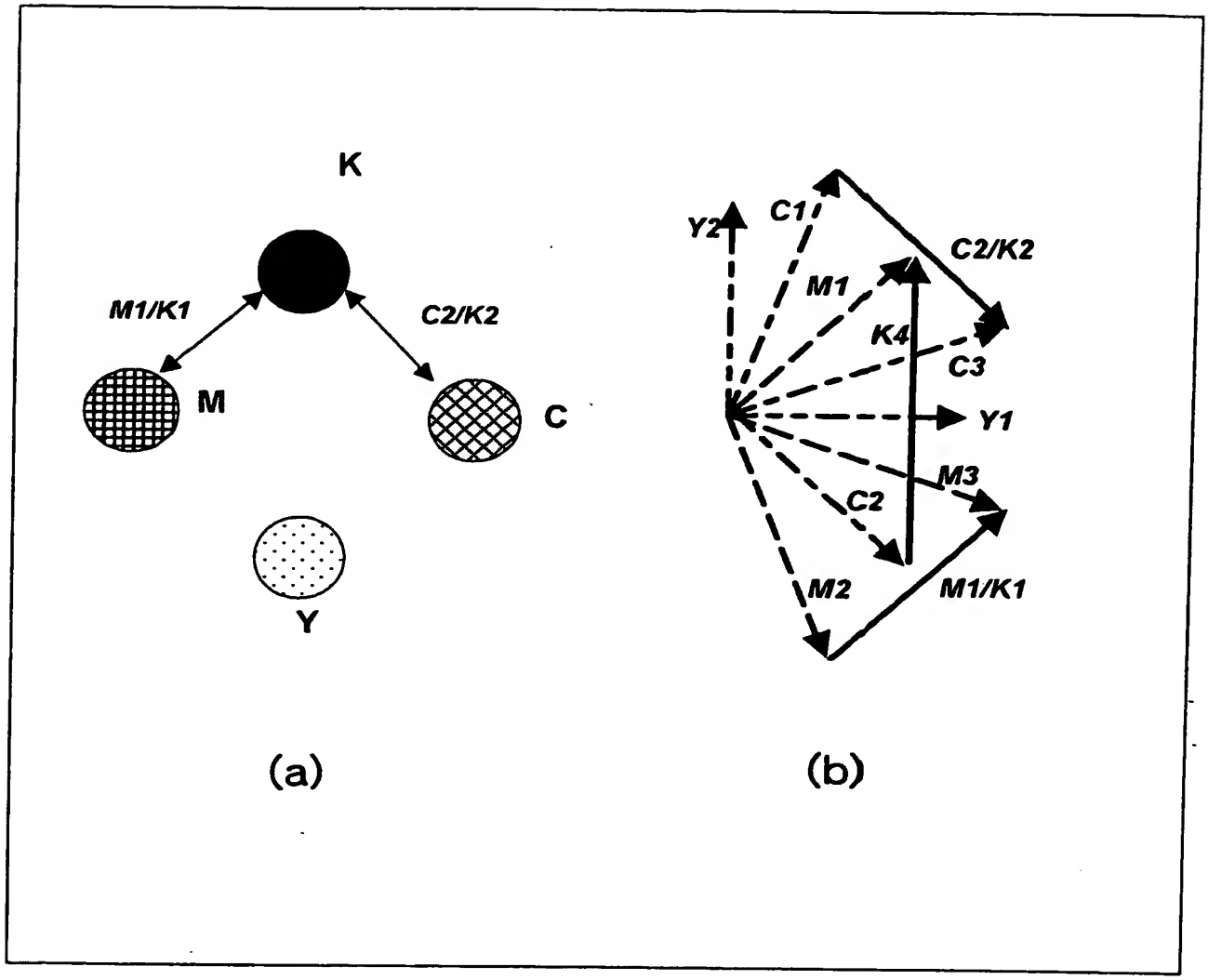
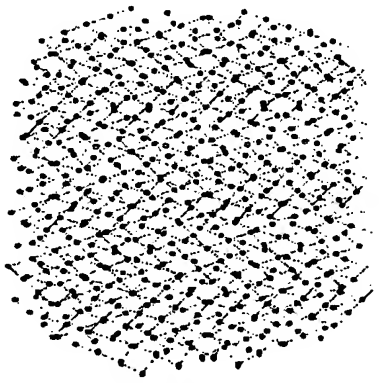
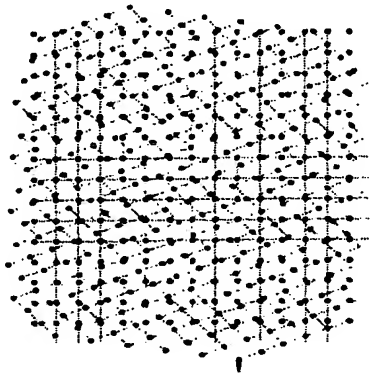


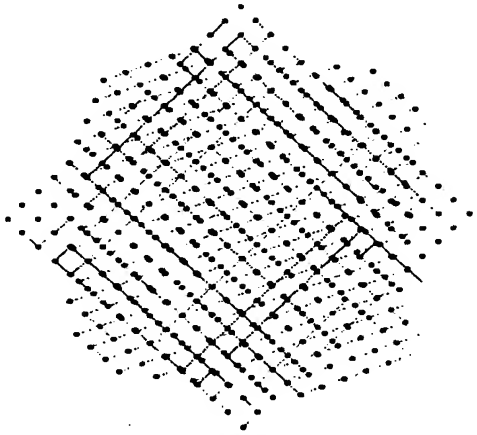
FIG. 30



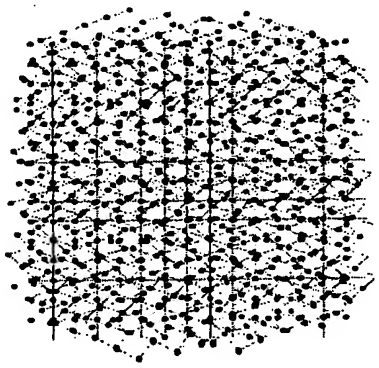
(1) M · C



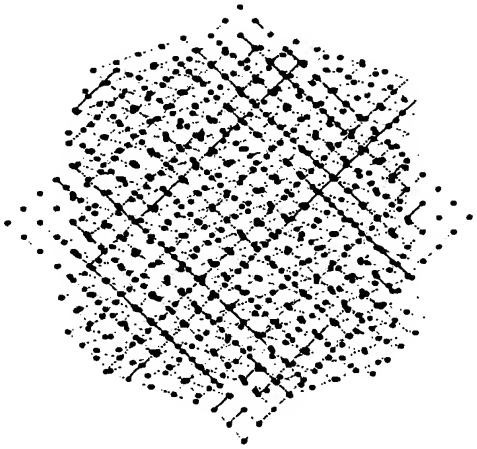
(2) M · Y



(3) M · K

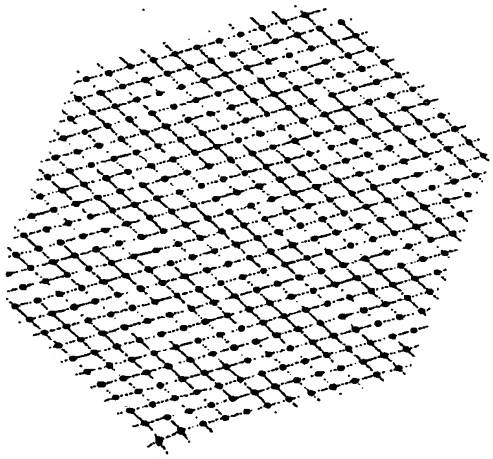


(4) Y · M · C

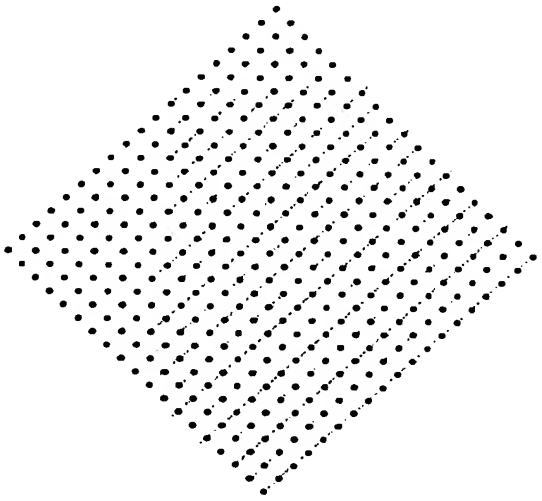


(5) M · C · K

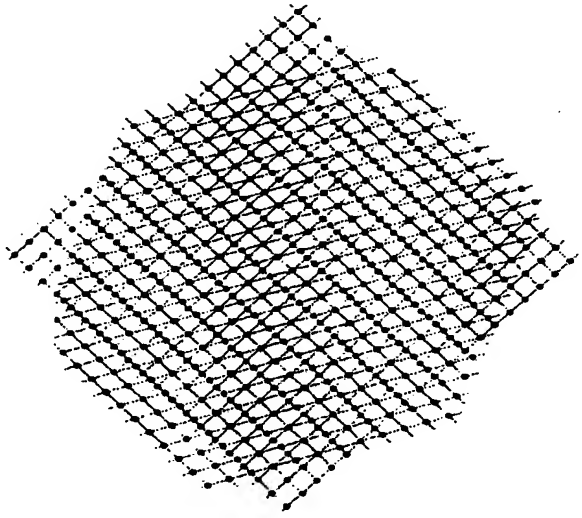
FIG. 31



(1) Y



(2) K



(3) Y-K

FIG. 32